

Mineralogy & Crystallography:
An Annotated Biobibliography of Books
Published 1469 through 1919

By
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Volume I

Tucson, Arizona
2007

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Edition Note

Internet Issue

(2007)

The files listed on the internet **do not** contain the complete and final versions of *Mineralogy & Crystallography: a Biobibliography* or the companion book, *Mineralogy & Crystallography: On the History of these Sciences*. Rather these are intermediate presentations of a portion of the computerized database being created to output a final version as printed books. However, even in this incomplete state these works give a substantial history of mineralogy and crystallography together with exhaustive descriptions of the major books. These files are being made available to the general public because of numerous requests for access to the information and the benefit to the compiler in the feedback he receives from the readers. Although it is a work in progress with errors and formatting problems, these intermediate files are still a very useable reference sources.

The *Biobibliography* and the *History* are companion works ultimately intended to each stand complete in itself, but to never the less complement each other, with information from one feeding into the other. This is particularly true of the section labeled “Regional Histories” in the *History*, which describes the development of mineralogy in individual countries. While gathering information for the *History*, an ever increasing number of additional titles are necessarily being added to the *Biobibliography*. Happily however, there is finally an end in sight to the project. It was not possible to create the *History* without having first compiled the *Biobibliography*, and now that it is being written, work on both books is steadily drawing to a point where the text to both can be given a final edit, and be made ready for actual publication as physical books. However, in advance of that future date, these files are being placed on the internet so that researchers and scholars may reference them.

For this project, the T_EX program developed by Donald Knuth professor emeritus of Stanford University has been used to format

the database text and elegantly typeset the volumes directly into the user friendly file format of PDF (Postscript Document Format) developed by Adobe Software. The PDF file format has many advantages, especially since these files can be viewed and printed through the Adobe Reader software, which is readily available. By this method it is possible to distribute electronic versions of the *Biobibliography* and *History* at a very cheap cost. Paper versions of the files can also be created by those individuals who prefer physical copy in their hands. Several paths are available to accomplish this goal. First download the files to your local computer and use either a home computer with a printer to output the over 2,000 pages or take the files to the local copy bureau and have them print the works double-sided and bound into three volumes.

The text of the *Biobibliography* and *History* are of course subject to change (sometimes radical) in the future. In particular, reference numbers for the individual titles listed in the *Biobibliography* unfortunately change because additions and deletions to entries in the source database cause these numbers to increase or decrease, respectively. The files placed on the internet were created in January 2007 in anticipation of the forthcoming 53st Annual Tucson Gem & Mineral Society Show to be held in Tucson, Arizona on February 8-11, 2007.

Since this is a work in progress, comments and suggestions about the content, format or missing entries are welcome by the compiler. The intention is to bring the work to completion within the next few years, so that it can finally be printed as actual physical books. If you wish to contact the compiler, he may be reached through email at the address provided below.

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Richard A. Bideaux,
mineralogist, friend and sometime
associate, who took an active
interest in this project
from the first day.

Preface

Few people today would claim mineralogy as a science balanced on the edge of significant discovery, but that was not the case in the past. Then, mineralogy and its companion study crystallography were important sciences with each new discovery being widely publicized and debated. Many researchers, some of whom may be counted among the greatest geniuses of the human race, contemplated, investigated and wrote about minerals and crystals. *Mineralogy & Crystallography: A Biobibliography*, attempts in some measure to spotlight these people, their discoveries and their books. It covers the period from the invention of mechanical printing through the first two decades of the twentieth century, and lists thousands of book titles in a variety of languages, many of which are described in bibliographic detail for the first time.

It is a reference intended for collectors, booksellers, librarians and historians of science, who have an interest in the development of mineral studies. Consequently, biographical sketches of all writers notable in the sciences of mineralogy and crystallography are included together with many names that have long since been forgotten by the march of time. It is limited in scope to researchers active in Europe, Russia and the Americas, from the beginning of time until 1920, and is a true biobibliography containing concise biographical notes and copious reference lists about the authors together with annotated bibliographies of their mineralogical and crystallographic books. Effort has been made to include as many biographical references as possible since many of the names listed are obscure and it is hoped that this ready reference will stimulate further research. Complementing each biography is a bibliography of the individual's independent books relevant to mineralogy and crystallography. Sometimes there is a single entry, in other instances many titles are listed. All issues, editions,

translations and abridgments that have been uncovered are recorded in the bibliography. If a copy of the book listed has been physically examined, it is described in full bibliographic detail, with complete pagination, collation, plate descriptions and a moderately detailed page by page recitation of contents. Otherwise as much information as could be located about the book is presented. This includes commentary related to the book's importance in the development of the science, notices of reviews and other references listing the title.

Two prime tests of the value of a bibliography are its accuracy and completeness. As to the first, no reference work consulted is entirely free from error, and it is a certainty that a careful reader will find mistakes in this volume. Hopefully, they are not numerous, and the compiler bears sole responsibility for them. Every bibliographer knows that reference works do not always agree about the facts of a subject's life, but that some sources are more reliable about the facts than others. In general, prominent researchers gain a place in important works such as *Dictionary of Scientific Biography*, in a major national biography (e.g. *Dictionary of American Biography*, *Neue Deutsche Biographie*), or in the biographical memoirs of learned society, and the information provided by these sources is usually reliable. Many contributors to the development of mineralogy and crystallography were not included in such reference works, however, and the confidence in the accuracy of the biographical data that has been traced is only as good as the citation(s) uncovered. For this reason, especially for less well-known researchers, multiple biographical citations (when available) are provided.

This work is intended to fit into a position that has never before been filled. It gives in one convenient work the digested contents of thousands of references with respect to their coverage of the sciences of mineralogy and crystal-

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lography, and provides a quick source of lookup for information on many individuals that would otherwise be difficult to trace. It was a work of passion to research, and it is hoped it will be a reference that stimulates the interest in the reader in the history of the sciences of mineralogy and crystallography.

This is an intermediate edition of a large portion of the computerized database, and is

intended to be replaced in the future by the competed work, which will hopefully have far fewer errors and more detail. This issue came about because of the frequent requests for copies of the *Biobibliography*, and the need of the compiler to test various typesetting paradigms. To the unseen reader, I hope you enjoy this work. It represents a substantial investment of my life.

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Acknowledgements

A work of this scope could not be completed without the invaluable cooperation of a large number of people and access to many private and public libraries. It has been a privilege to meet and work with the many individuals who because of a shared interest in the history of mineralogy, have freely given of their knowledge in the field and helped to make the descriptions in this work better than they otherwise would have been.

A chance to write the sale catalog of the Frederick H. Pough library in 1982 provided descriptions of many rare mineralogies, especially those containing hand-colored illustrations. Early in the project H. Stanton Hill supplied a duplicate set of photocopies of title pages to books he owned at the time. In addition, some of those contacted during the course of research very kindly invited me into their homes and allowed me unfettered access to their remarkable libraries. These include Alix and Russell Filer, Richard Bideaux, Jeanne and William “Bill” Larson, Adriana and Renato Pagano, Elna and Richard Hauck, and Joseph Freilich. Extended visits to the three outstanding mineralogical libraries of The Mineralogical Record courtesy of Wendell Wilson, Dona and Wayne Leicht and Monika and Herbert Obodda made it possible to fully describe thousands of rare and otherwise unavailable works. The recent work of Google in scanning the books of several important libraries in to their Google-Book project (<http://www.books.google.com/>) has allowed for the inclusion of hundreds of additional descriptions. A similar on-line effort by Microsoft in digitizing volumes from the British Library will in the future perhaps allow for even more volumes to be described.

Linda Winograd and Hugh Saunders helped secure photocopies of title pages of rare items from The United States Geological Library, Reston, Virginia, and The British Library, London, England, respectively, which al-

lowed for their transcriptions to be included. Other collectors who have provided facsimile title pages and descriptions of their books include Petr Sztacho, Ann and Si Fraizer, Mary Murphy, Eric Asselborn, Gilbert Gautier, John Sinkankas, Lawrence Conklin, and Auréle La Rocque. Unexpectedly, Johan Kjellman of the Department of Earth Sciences, Upsala University, Stockholm, Sweden, having heard of this project spent a tremendous amount of time and supplied an outstanding number of fully described entries dealing with Swedish mineralogy and crystallography. Each of his contributions in the biobibliography is happily signed with his name.

A number of booksellers and auction houses have generously answered queries and supplied information about books they have held in inventory. These include Antiquariat Junk, Wheldon & Wesley, Ltd., Bernard Quaritch, Ltd., Zeitlin & Ver Brugge, H.P. Kraus, Jeremy Norman, Jack Garvin, Frank Chambers, Antiquariaat Theo de Boer, W.P. Watson Antiquarian Books (Rick Watson), A. Asher & Co. B.V. (Julius Steiner), Swann Galleries, Rock of Ages (Linda and John Stimson), The Gemmary (Faye and Rick Blankenhorn), Merk’s Jade (Roger Merk), Sotheby’s, Christie’s, Henry Sotheran, Ltd., Reiss & Sohn, and F. Zisska & R. Kistner. Special attention must be given to the booksellers Jonathan Hill, New York City, New York, Antiquariat Andreas Müller, Waldems-Reichenbachand, Germany, and Mary and Ed Rogers, Poncho Springs, Colorado, who have at every opportunity supported this project. Additionally, the dealer catalogs of all these firms and many, many other booksellers of past years have provided citations to obscure references, as well as other bibliographical details of mineralogical and crystallographical books.

Financial assistance in the form of a grant and several gifts helped defer travel and inci-

ACKNOWLEDGEMENTS

dental expenses in conducting the research for this book. In 1996, the Geo-Literary Society showed its support for the *Biobibliography* by providing a grant. In addition, monetary gifts were received from several individuals who wish to remain anonymous. I hope that the finished project is worthy of their early support.

Over the decades this project has progressed, numerous librarians have taken an interest in the project and have arranged for title page reproductions and addressed other biobibliographical matters. It is impossible to mention them all because many remain nameless through the Interlibrary Loan (ILL) process. However, several librarians have consistently given help when it was requested, and special thanks are given to Dona Dirlam of The Richard T. Liddicoat Library, Gemological Institute of America and Leslie Overstreet of The Smithsonian Libraries.

Visits to personally examine the holdings of several institutional libraries have also added detailed information to the biobibliography. These locations include:

ARIZONA STATE UNIVERSITY LIBRARY, TEMPE, AZ.
ARTHUR LAKES LIBRARY, COLORADO SCHOOL OF MINES, GOLDEN, CO.
BRANNER EARTH SCIENCES LIBRARY, STANFORD UNIVERSITY, STANFORD, CA.
HISTORY OF SCIENCE LIBRARY, NORMAN, OK. (PENDING ANOTHER VISIT)
HOOVER COLLECTION OF MINING AND METALLURGY, SPRAGUE LIBRARY, CLAREMONT COLLEGES, CLAREMONT, CA. (PENDING ADDITIONAL VISITS)
CABOT SCIENCE LIBRARY, HARVARD UNIVERSITY, CAMBRIDGE, MA. (PENDING VISIT)

THE RICHARD T. LIDDICOAT LIBRARY, GEMOLOGICAL INSTITUTE OF AMERICA, CARLSBAD, CA. (PENDING VISIT)
LIBRARY OF THE UNITED STATES GEOLOGICAL SURVEY, DENVER, CO.
MINERALOGICAL RECORD LIBRARY, TUCSON, AZ.
NEW YORK PUBLIC LIBRARY, NEW YORK, NY.
RESEARCH LIBRARY, GETTY RESEARCH INSTITUTE, LOS ANGELES, CA. (PENDING VISIT)
UNIVERSITY OF ARIZONA LIBRARY, TUCSON, AZ.
UNIVERSITY OF ILLINOIS LIBRARY, CHAMPAIGN, IL.

Libraries that have supplied title page facsimiles and answered biographical and bibliographical questions with unrelenting cheerfulness include:

ARIZONA STATE UNIVERSITY LIBRARY, TEMPE, AZ.
THE BAKKEN LIBRARY, MINNEAPOLIS, MN.
THE BRITISH LIBRARY, LONDON, ENGLAND.
HARVARD LIBRARIES, CAMBRIDGE, MA.
DEGOYLER HISTORY OF SCIENCE LIBRARY, UNIVERSITY OF OKLAHOMA, NORMAN, OK.
LIBRARY OF CONGRESS, WASHINGTON, D.C.
LIBRARY OF THE NEW YORK MEDICAL ACADEMY, NEW YORK CITY, NY.
LIBRARY OF THE UNITED STATES GEOLOGICAL SURVEY, RESTON, VA.
LIBRARY OF THE UNIVERSITY OF CALIFORNIA, LOS ANGELES, CA.
THE RICHARD T. LIDDICOAT LIBRARY, GEMOLOGICAL INSTITUTE OF AMERICA, CARLSBAD, CA.
THE NEW YORK PUBLIC LIBRARY, NEW YORK CITY, NY.
THE NATIONAL LIBRARY OF MEDICINE, BETHESDA, MA.
THE SMITHSONIAN INSTITUTION LIBRARIES, WASHINGTON, D.C.
STANFORD UNIVERSITY LIBRARY, STANFORD, CA.
TUCSON PUBLIC LIBRARY, TUCSON, AZ.
UNIVERSITY OF ARIZONA LIBRARY, TUCSON, AZ.
UNIVERSITY OF ILLINOIS LIBRARY, CHAMPAIGN, IL.

Finally, the compiler's thanks goes out to all the collectors, librarians and bibliophiles who provided comments and guidance on previous issues of the *Biobibliography* and continue to help shape this project.

Introduction

This work, *Mineralogy & Crystallography: a Biobibliography*, describes the lives and books of many researchers that are important to the development of these two sciences. It includes information on works published through December, 1919. This terminal date was chosen because of its particular significance in the development of the sciences with regard to the spreading use of X-ray diffraction techniques after World War I and the disinterest of the compiler in nearly all mineralogical books published after this date. The works listed therefore, were first issued between the earliest item described, Pliny's *Historia Naturalis* (1st ed., Venice, 1469), and December 31, 1919—a span of 450 years. Modern reprints of older titles first issued during this period are also listed. In a few instances the compiler has an appreciation for a work first published after the terminal date, and its description has been included for his own amusement.

Headings of Entries

This is essentially an author catalog with biographical commentary and references heading an annotated bibliography of the authors mineralogic and crystallographic books. The cataloging procedure followed is based on that of the Anglo-American Cataloguing Rules (AACR2)^[1] with minor modifications referred to below.

Personal names. The principle of using for the heading the most widely used form of the name has been followed, but (a) medieval names containing a forename are entered under the forename, e.g. ALBERTUS MAGNUS, not

MAGNUS, ALBERTUS; (b) Latin or Greek forms if commonly used are preferred to the vernacular, e.g. AGRICOLA, GEORGIUS, not BAUER, GEORG; (c) Westernized forms are used for Arabic or other Oriental writers, e.g. AVICENNA not IBN SĪNA, ABŪ 'ALĪ AL-ḤUSAYN IBN 'ABDALLĀH. Noblemen are entered under the title or family name, whichever is the better known. Contrary to Anglo-American Cataloguing Rules practice, names with unlauded vowels (ä, ë, ï, ö, ü and ÿ) are retained with the umlauts and inserted into the sequence as though spelt as 'a', 'e', 'i', 'o', 'u' and 'y'. For further information see ARRANGEMENT OF TITLES within this introduction.

Anonymous and pseudonymous works. Where a book was published anonymously, but the authorship is known it is entered under the name of the author. Occasionally, if a pseudonym is better known, it is listed under the pseudonym. All works attributed to a single author, whether acknowledged or not, are entered under the same main heading, i.e. anonymous and pseudonymous works are not separated from those in which the author's true name appears, as they are in the *British Library Catalogue* (BLC in the reference list). Where authorship is indicated only by unidentified initials, the last initial excluding any abbreviated designation such as M.D. is used for the heading. Works for which the author is unknown are listed under the first substantive words of the title.

Spurious works. Works falsely attributed to an author are arranged following the author's genuine works but under a separate heading consisting of the author's name preceded by the word 'Pseudo', e.g. PSEUDO ARISTOTLE. This does not apply to writings which are generally included in the corpus of an author's work but are of doubtful authenticity. These works are arranged under the main heading but with a

[1] M. Gorman and P.W. Winkler, *Anglo-American cataloguing rules*. Second edition. London, The Library Association, 1978. [i]-xvii, 1-620 p.

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distinctive subheading, e.g. SUPPOSITIOUS AND DOUBTFUL WORKS.

Dissertations. The Anglo-American Code is followed in preference to the standard adopted in the *British Library Catalogue*, i.e. the main entry for a dissertation is entered under the name of the 'Praesesidium' rather than that of the 'Respondent.' Cross-references are then provided from the 'Respondent' to the main entry of the Praesesidium through the name index.

Joint authors. The main entry for a work is entered under the senior author (usually listed first on the title page). Cross-references are then provided from all subsequent authors to this main entry. In a few cases when a work is known to be the result of a junior author's labor, the main entry is placed under the name of the junior author, and cross-references are provided from all other authors. For example, Brooke & Miller's *An Elementary Introduction to Mineralogy* (London, 1852) is listed under Miller's corpus based on information supplied by Brooke in the preface. A cross-reference to Miller is then supplied under Brooke's entry.

Corporate and group headings. In addition to the usual corporate headings (e.g. GEORGE ENGLISH & CO.), two special group headings are employed simply to bring together like material which would otherwise be difficult to trace in an author catalog, e.g. (a) CATALOGS OF MINERAL COLLECTIONS, a heading chosen for a class of items that effectively was the creation of the collector, who is usually not the author of the catalog. Cross-references are given to the full entry; (b) JOURNALS AND PERIODICALS, under which heading are listed the titles of all regularly published serials described in the bibliography, with cross-references to their main entry.

Cross-references. Reference is made from alternative forms of the name to the one adopted for the main heading. Names with prefixes are normally entered according to the Anglo-American Code, unless an exception is made because some alternative form appears to be more widely accepted. Cross-reference from the part(s) of name not used for entry is omitted, except where it can be used to clarify where in the sequence an author is

entered. References from Arabic forms are kept to a minimum because (a) the Westernized form which was commonly used in Renaissance Europe is familiar to Oriental scholars, and others are more likely to seek the writings of these authors immediately under the Western name; (b) the complexity of Arabic names makes cross-reference of little use unless it is done on a scale which is only practicable in a very large work such as that of the *British Library Catalogue*. Cross-references within the main body of the text have been kept to a minimum. However, the names of editors, translators, and others contributing in any form to a work, including printers and publishers may be found in the comprehensive name index provided at the end of the *Biobibliography*. For further information, see the section labeled INDEXES below.

Entry Description

Biography

The main entry consists of a name, either personal or corporate, or the first words of a work published anonymously.

Personal Names. If the main entry consists of a persons name (most common), the full name of the individual is provided, as much as possible in agreement with the standard biographies available to the compiler (see REFERENCES for a complete list). When discrepancies arose, national biographies pertinent to the individual's native-land took precedence for the correct spelling of the name. If the individual in question could not be located in any such biography(s), the spelling of the name as used by *The National Union Catalogue* (NUC in the reference list) took precedence, followed in turn by *The British Library Catalogue* and then the *Catalogue Général des Livres Imprimés de la Bibliothèque Nationale* (BLC and CBN respectively in the reference list). Cross-references from name variants were then established back to the main entry. The personal name is followed by the places and dates of birth and death enclosed in parentheses. The word BORN precedes information indicating birth data, while the term DEATH precedes death data. The nationality and occupation(s)

of the individual is then provided. A condensed biographical portrait of the person is then given, emphasizing various mineralogical aspects of the life. Listed at the end are citations to published obituaries and biographies where further biographical detail may be found. For the more famous of the researchers, these lists are not necessarily exhaustive. For example, there is a tremendous body of secondary literature concerning Linneaus and the citations listed in his biography, although numerous, are by no means complete. Within the references, notice is also given of published portraits and other likenesses of the author and comprehensive bibliographies covering the individual that have come to the compiler's attention.

Commercial Firms. If the main entry consists of the name of a commercial firm, the full name of the company is given. This is followed by information giving details, as much as they are known, of the firm's history and proprietors. At the end are listed references where further information may be researched.

Museums. If the main entry consists of the name of a museum, the city and country where the museum is located is given, followed by the full name of the museum. This is followed by details, as much as they can be ascertained, of the history of the body, including the date of founding. At the end are listed citations where further information may be researched.

Societies and Organizations. If the main entry consists of the name of a society or other organized body, the city and country where the society was organized is given. This is followed by the full name of the society or organization. This is followed by details, as much as they can be ascertained, of the history and membership of the society. At the end are listed citations where further information may be researched.

Anonymous Titles. If a work is listed that has an unknown author, the first substantive words of the title will be used to create its heading. No other information will be provided in the heading of the entry.

Bibliography

A listing of mineralogical and crystallographical books authored by the subject follows the

heading entry. The most important source for this section has of course been the close examination of the books themselves. For this the resources of several private and public libraries have been invaluable (see ACKNOWLEDGEMENTS for a list). The next best source for entries have been photocopies of the title pages of the various works, while the remainder of the entries were gathered from many general and specialized bibliographies as well as the internet and a large selection of bookseller catalogs.

Description of Bibliographical Entries

The most complete bibliographic entries are those where a copy of the listed title has been carefully examined, while less complete descriptions occur for those works not actually examined. The design of the bibliography was derived after reviewing hundreds of bibliographies on a wide variety of subjects. In addition, a relatively recent book on bibliography design helped avoid several pitfalls.^[2] The format chosen to describe the individual titles is a combination of the ideas presented in the bibliographic manuals of Bowers,^[3] Esdaile,^[4] Gaskell,^[5] and McKerrow.^[6] The most complete form of an entry consists of the following features.

Entry Number. Each title listed in the bibliography is given a unique number. These start at 1 and increment for each title listed through out the whole bibliography.

Language(s) and Year(s). Publication language and year in which the title appeared. Other

[2] S.E. Berger, *The design of bibliographies. Observations, references and examples.* London, Mansell, 1991. [i]-viii, [2], [1]-198 p., index, biblio.

[3] F. Bowers, *Principles of bibliographical description.* Introduction by G.T. Tanselle. Winchester, St Paul's Bibliographies; New Castle, Delaware, Oak Knoll Press, 1994. [i]-xxv, [1]-505 p. [Reprint of the 1949 edition].

[4] *Esdaile's manual of bibliography.* Revised by Roy Stokes. London, George Allen, 1954. [1]-392 p., illus., index.

[5] P. Gaskell, *A new introduction to bibliography.* New York & Oxford, Oxford University Press, 1972. [22], [1]-438 p., illus., index.

[6] R.B. McKerrow, *An introduction to bibliography for literary students.* Oxford, At the Clarendon Press, 1928. [i]-xv, [1], [1]-359, [1] p., index.

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editions and issues are usually listed as separate entries under the same author.

Edition and Translation Note. Following the Language(s) and Year(s) and enclosed in square brackets is a short note indicating either edition or translation information about the forthcoming title.

Title. The title as it was originally printed is given. If a copy of the title page has been examined it is represented in quasi-facsimile transcription as accurately as possible. Punctuation and accent marks have been reproduced as best as possible, as have special characters such as τ , φ , \mathfrak{Z} , \mathcal{O} , Γ , Θ , α , ϵ , γ , λ , and β . Spelling as it appears on the title page has been copied exactly. Vertical bars “|” indicate the end of a line within the title. Printed errors in the title are followed by a comment of the form [!]=mistake or [sic]=as written. Extraneous descriptions or comments relevant to the format of the title are enclosed in square brackets. Common examples include [short rule], [rule], [double rule], and [ornament].

Format. The pagination of the book(s) begins with reference to the predominant number of leaves in a single section. For example, 2°=folio, 4°=quarto, 8°=octavo, 12°=duccimo, etc. The format is ended by a colon “:”.

Collation. In older books it was common for the printer to add some mark on the various folded section of a book to facilitate the gathering of the signatures in correct order so they could be bound up. These marks were usually a number or a letter or a combination thereof. In this bibliography the gatherings are listed after the format. Following standard bibliographic practice, the Greek character Π p is used to indicate a book's preliminary unsigned leaves and the Greek character χ c indicates unsigned leaves within the body of the book. However, in difference from common practice the collations presented do not attempt to account for all pages of a signature. Rather the collations given account for pages in a book with printing on them.

Leave Count. After the collation, the absolute count of leaves is given. This is useful in determining if the collation matches the

pagination. For example, the collation provides a formulae of the leaf count, whose total if multiplied by 2 must equal the page count as given by the pagination. If they don't equate, a discrepancy exists in one or the other or both! For example, the collation p^2 a-c⁸ d³ says there are $2+8+8+8+3=29$ leaves contained in the book, which means there should be $29 \times 2 = 58$ pages.

Pagination. A short hand description of the numbering that occurs on the pages is given. Items enclosed in square brackets are assumed and do not actually appear on the page. If appropriate, descriptive material noting the number of plates, maps, tables, etc. will end the pagination of each volume.

Page Size. The size of the title page measured in millimeters is provided. Measurement is done first along the length of the page, then across the width. The length of the title is defined to be perpendicular to the reading direction of the text on the title page.

Contents. Each book is unique in the method the author and/or publisher has elected to order the information. The contents provides a description of this arrangement. However, it is not meant to be an exhaustive page by page account of the books information. Rather this is an overview of the major sections contained within the volume(s), with the beginning and ending pages indicated or in some cases the beginning and ending leaves. Descriptions enclosed in quotes are derived directly from the first page indicated, while those not in quotes are the compilers interpretation of the intended content. Any comments included by the compiler are enclosed in square brackets.

Plates, Tables and Maps. In some books where it is not possible to describe the illustrations depicted on the plates easily, a list of the individual or groups of plates will be provided. Maps and tables when they represent a substantial portion of the volume(s) will also be treated in a similar fashion.

Rarity. An attempt is given to provide an idea of the relative rarity of the title listed. This is subjective information based on a wide range of characteristics, such as the book's language, date of publication, frequency of listings in bookseller catalogs, and the collective holding

in public and private United States, British, and European libraries, etc. Several categories are provided to distinguish rarity, i.e. ONLY COPY KNOWN=only one copy traced, EXTREMELY RARE=2-5 copies traced, VERY RARE=6-12 copies traced, RARE=13-22 copies traced, VERY SCARCE=23-32 copies traced and SCARCE=more than 33 copies traced.

Commentary. The commentary describes the importance (if any) of the title to the history and development of mineralogy or crystallography. Inclusion may be made of a contents summary, quotations from the work, translation of the title, publishing history, descriptions of notable illustrations, etc.

Other Editions, Translations & Reprints. For books that went through many editions or were reprinted after 1919, this section will provide the pertinent information about the title. In addition, titles that have only minor mineralogical information, but had multiple editions or translations, will use this section to list other variations of the book. Usually, this consists of a short title, place of publication, year and pagination. Rarely, a full description with commentary will be provided.

References. If a particular title is important to the development of either science, other authors will most likely have written about the book, and its place in history. In addition, various library catalogs or bibliographies may include the title. Citations to these other writings will appear in this position. Reference to book reviews is also given here. If no reference to the described title has been found, REFERENCES will not appear at the end of the commentary.

Arrangement of Titles

The headings in the *Biobibliography* are in a single alphabetical order and consist primarily of the names of the authors of the various works. Headings such as those used for anonymous works, periodicals, journals, official institutions, museums, mineral collectors, dealers, societies, or other national bodies are included in the same alphabetical sequence. Frequent use is made of cross references when a particular entry could be searched for under different headings.

Roman Alphabets

Names originally written in a Roman alphabet language retain all diacritical marks and special characters as they would if written in their native language. To simplify the location of a particular name, all accented characters fall into the same alphabetical sequence as if they were not accented. Thus á=a, ç=c, ê=e, í=i, ô=o, ò=o, ū=u, etc. Contrary to Anglo-American Cataloguing Rules practice, there is no exception to this rule for the unlauded vowels, ä, ë, ï, ö, ü and ÿ. When one or more of these characters appears in a name, each occurrence of the vowel is treated in the alphabetical sequence as though it is a normal letter. Thus, ä=a, ë=e, ï=i, ö=o, ü=u and ÿ=y.

The old use of a superscripted “e” above a letter to indicate an unlauded vowel has been retrained in the title transcriptions. Thus for transcription to a modern convention, â=ä, ê=ë, ô=ö, ū=ü and ÿ=ÿ.

CYRILLIC	ENGLISH	CYRILLIC	ENGLISH
А а	a	Р р	r
Б б	b	С с	s
В в	v	Т т	t
Г г	g	У у	u
Д д	d	Ф ф	f
Е е	e	Х х	kh
Ё ё	e	Ц ц	ts
Ж ж	zh	Ч ч	ch
З з	z	Ш ш	sh
И и	i	Щ щ	shch
Й й	ÿ	Ъ ъ	”
К к	k	Ы ы	y
Л л	l	Ь ь	’
М м	m	Э э	é
Н н	n	Ю ю	îû
О о	o	Я я	îâ
П п	p	Ђ ђ	ie

TABLE 1

Non-Roman Alphabets

Names originally written in the Russian, Belorussian or Bulgarian languages and utilizing the Cyrillic alphabet have been transliterated to the roman alphabet. There are a number of tables available for the purpose of

INTRODUCTION

transliteration, and the one chosen for the *Biobibliography* is also used by the Library of Congress for transliterating Russian with diacritical marks.^[7] A representation of the transliteration table used within the *Biobibliography* is presented in Table 1.

In addition, there are certain letter combinations, usually occurring at the end of a Russian word, that convert to specific sequences in English. For this purpose specific conversions were used (see Table 2).

CYRILLIC	ENGLISH
-ый	-yĭ
-ий	-iĭ
-ия	-iĭa
-ье	-'e
-ьи	-'i
-кс	-ks

TABLE 2

Order under the Main Heading

For individual works and collections (including analytical entries) the order is chronological by date of publication (entries of the same date being arranged alphabetically by title), but all versions of the same work or collection are grouped together. Such groups are arranged by language, the order of languages being chronological by date of publication of the earliest entry in each. Under each language the arrangement is (a) original editions, if more than one, in chronological order; (b) translations, if more than one, in chronological order; (c) editions of the same language in chronological order; (d) specific cross-references in alphabetical order. See Figure 1 for a diagram of the general scheme.

Within entries, general cross-references are arranged in alphabetical order, but multiple references to a single heading main entry are condensed to a single cross-reference. In a few cases where a very substantial number of entries appear under a single heading, such as under PLINY, titles are grouped in a special way, usually according to the order adopted in the standard editions of the complete works of

the author. A summary of the arrangement will be found at the beginning of each of these groups. There are also a few cases where minor variations occur, these are indicated by subheadings within the body of the entry.

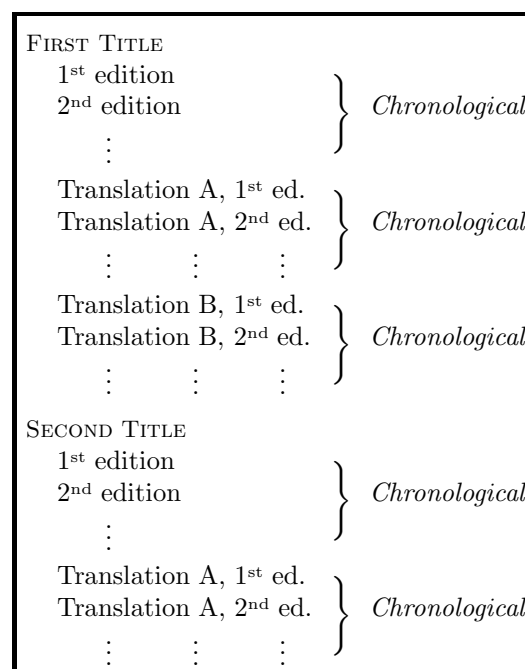


FIGURE 1: General Ordering of Titles

Indexes (not implemented)

To facilitate the use of this *Biobibliography*, a series of comprehensive indexes has been provided at the end. In order to make maximum use of the index, when a citation refers to a bibliographic title entry, reference is back to the titles entry number in the list. In the case of references back to a main biographical entry, the page number, rather than an item number is used in the index. The page number is distinguished from an item numeral by the application of a bold font. The individual indexes are described below.

Indexes of Towns and Printers. These list under each country the various places of publication and the names of the printers and publishers. It is hoped that these very extensive indexes will prove a useful contribution to the study of

[7] J.T. Shaw, *The transliteration of modern Russian for English language publications*. Madison, Univ. of Wisconsin Press, 1967.

printing and mineralogical publishing from the fifteenth to the early twentieth century.

Index to Anonymous Works. When a work published anonymously can be attributed to a known author, it has been entered in that authors bibliography. However, a collector, bookseller or librarian, actually examining the work may not know the actual author. Therefore this index of short titles with references to the main entry is provided to facilitate their lookup.

Name Index. This is a comprehensive index to all names mentioned throughout the body of the *Biobibliography*. The names are listed in a single alphabetical sequence with cross-references from name variants included. Authors, translators, contributors, editors, printers, publishers, artists, engravers and other incidental names are listed in a single sequence, with reference to the page or entry where mention is made.

Subject Index. This is an index to subjects mentioned throughout the body of the *Biobibliography*.

Symbols & Abbreviations

\$	United States dollar, -s	DBF	Dictionnaire Biographique Française
c	unsigned gathering in text	DBI	Dizionario Biografico Degli Italiani
©	copyright	dept.	department
£	English pound, -s	Dfl.	Dutch florin
ℓ.	leaf, leaves	diagr.	diagram, -s
p	unsigned gathering ahead of text	dict.	dictionary
Abhandl.	Abhandlung, -en	dir.	director
abstr.	abstract, -ed	diss.	dissertation
Abt.	Abteilung, -en	DM.	Deutschmark
A.D.	Anno Domini	DNB	Dictionary of National Biography
advert.	advertisement, -s	Dr.	doctor
Akad.	Akademie	DSB	Dictionary of Scientific Biography
allg.	allgemeine	D.Sc.	doctor of science
Amer.	American	dupl.	duplicated
ann.	annum, annual, etc.	edit.	edition, editor
annot.	annotated, annotation	educ.	educated
arch.	archive	e.g.	for example
assoc.	associate, association	engrav.	engraved, -ing
Aufl.	Auflage	enl.	enlarged
B.C.	Before Christ	esp.	especially
Bd.	Band	et al.	and others
b&w.	black & white	f., ff.	folio, -s, or leaf, leaves
biblio.	bibliography	facs.	facsimile
biogr.	biography	fasc.	fascicule
BL	British Library	Festschr.	Festschrift
BMC	British Museum Catalogue	ff.	following
BM(NH)	British Museum (Natural History)	fig.	figure
boll.	boletín, bolletino	fl.	flourished
B.S.	bachelor of science	fold.	folded, folding
bull.	bulletin	Forsch.	Forschung, -en
c[year]	circa[year]	frontis.	frontispiece
ca.	circa	ft.	foot, feet
cat.	catalog	fwd.	foreword
cf.	consult further, compare	geogr.	geography, geographical, etc.
chi c	unsigned gathering in text	geol.	geology, geological, etc.
Cie.	compagnie	Gesell.	Gesellschaft
cIo	1,000 years	GIA.	Gemological Institute of America
class.	classic, classification	gloss.	glossary
cm.	centimeter	gm.	gram
Co.	company	govt.	government
col.	column	GPO	Government Printing Office
coll.	collection	grav.	gravure
cols.	columns	H., Hft.	Heft
comm.	communication	hist.	history, historical, etc.
cont.	content, -s	HMSO	Her Majesty's Stationary Office
contrib.	contribution, contributor	hon.	honorable, honorary
corp.	corporation	ibid.	in the same place
cut.	guillotined	i.e.	that is
DAB	Dictionary of American Biography		

SYMBOLS & ABBREVIATIONS

illus.	illustration	p.	page, citation
in.	inch	pg.	page
inc.	incorporated	pgs.	pages
incl.	included, inclusive	pp.	pages, inclusive
info.	information	paleont.	paleontological, etc.
init.	initial	passim.	here & there
inst.	institute, institution, etc.	Ph.D	doctor of philosophy
int.	international	phil.	philosophic,-al,-y, etc.
intro.	introduction	photo.	photograph,-ic, etc.
ISBN	International Standard Book Number	Phys.	Physik
Jb., Jg.	Jahrbuch, Jahrgang	pi <i>p</i>	unsigned gathering ahead of text
Jr.	junior	post.	after
kaiserl.	kaiserlich, -e, etc.	praes.	praseidium
Kl.	Klasse	Pref.	preface
königl.	königlich, -e, -en, etc.	proc.	proceedings
krist.	kristallographisch	prof.	professor, professional, etc.
kungl.	kunglich, -e, etc.	pseud.	pseudonym
£	English pound	pt., pts.	part, parts
ℓ.	leaf, leaves	publ.	publication, publisher
lab.	laboratory	quart.	quarterly
DLC	Library of Congress	recte	correctly
lect.	lecture	recto	right
lit.	literature, literary	ref.	reference
litho.	lithograph, -ic	reprod.	reproduction
ltd.	limited	rept.	report
mag.	magazine	res.	research
math.	mathematical, mathematisch, etc.	rev.	revised, -ion, review
med.	medical, medicine, etc.	rotograv.	rotogravure
med.	mededelingen	Schr.	Schrift, -en
mfr.	manufacture, -r	sect.	section, -s
mech.	mechanical	sep.	separate
mem.	memoir, -e	ser.	serial
mineral.	mineralogical, mineralogisch, etc.	sig.	signature
misc.	miscellaneous, miscellany	Sitzungsb.	Sitzungsbericht, -e
misnum.	misnumbered	soc.	society
Mme.	madame	spec.	speciality
Mitt.	Mitteilung, -en	Sr.	senior
mm.	millimeter, -s	subj.	subject
mono.	monograph	suppl.	supplement
ms.	manuscript	supt.	superintendent
M.S.	master of science	symp.	symposium
mus.	museé, museum	tab.	table
nac.	nacional	tech.	technical, technology
Nachf.	Nachfolger	temp.	temperature
nat.	national, -e	terr.	territory
naturf.	naturforschende, -n	trans.	transaction
nauk.	science	transl.	translation
n.d.	no date	übers.	übersetzt
NDB	Neue Deutsche Biographie	univ.	university
n.F.	neue Folge	unnumb.	unnumbered
no.	number	USGS	United States Geological Survey
nos.	numbers	USNM	United States National Museum
n.p.	no place	verso	backside
Nr.	Nummer	Verhandl.	Verhandlung, -en
n.s.	new series	vs.	versus
num.	numerous	Wiss.	Wissenschaftlich, -e, -en
obit.	obituary	Zentralbl.	Zentralblatt
orn.	ornament, -al, -s	zool.	zoology, etc.
		Zs.	Zeitschrift

Serials & Journals

- Acta Eruditorium.
Acta Nova Eruditorium.
Allgemeine Deutsche Bibliothek.
Allgemeine Literatur-Zeitung.
Almanach der Akademie der Wissenschaften in Wien.
Amateur Geologist.
Ambix.
American Geologist.
American Journal of Science.
American Mineralogical Journal.
American Mineralogist.
Annalen der Physik und Chemie (Poggendorff).
Annals and Magazine of Natural History.
Annals des Chimie.
Annals of Natural History.
Annals of Science.
Annals of the National Academy of Science.
Annual Register.
Annual Report of the Geological Society of London.
Beiträge zur Geologie von Thüringen Beiträge zur Mineralogie und Pétrographie.
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Engineering and Mining Journal.
Engineering Geology.
English Review.
Erfurtischer gelehrte Zeitung.
Földtani Közlöny.
Fortschritte der Geologie und Palaeontologie.
Fortschritte der Mineralogie.
Gentleman's Magazine.
Der Geologie.
Göttingische Anzeigen.
Göttingische gelehrte Anzeigen.
Hamburgisches Magazin, oder Gesammlete Schriften zum unterricht und Vergnügen aus der Naturforschung.
Jahrbuch für Mineralogie.
ISIS. Journal of the History of Science Society.
Journal Asiatique.
Journal de Physique, de Chemie et d'Histoire Naturelle.
Journal des Mines.
Journal des Scavans.
Journal für die Liebhaber des Steinreichs und der Conchyliologie (Schröter).
Journal für die Lieratur und Kenntniss der Naturgeschichte (Schröter).
Journal of Chemical Education.
Journal of Geological Education.
Journal of the Franklin Institute.
Journal of the Geological Society of India.
Journal of the Geological Society of Iraq.
Journal of the Geological Society of London.
Kungliga Svenska Vetenskapsakademiens Handlingar.
Leipziger allgemeines Verzeichniss.
Leipziger gelehrte Zeitung.
Lapidary Journal.
Lychnos.
Matrix: A Journal of the History of Minerals.
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Mexican Geologist.
Mineral Collector.
Mineral Digest.

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 Mitteilungen der Geologischen Gesellschaft in Wien.
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 Nature.
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 Vogels Medicinische Bibliothek.
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ABHANDLUNGEN.

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See: **Privatgesellschaft.**



PEDER ABILDGAARD

ABILDGAARD, Peder Christian. (BORN: Copenhagen, Denmark, 22 December 1740; DIED: Copenhagen, Denmark, 11 January 1801) *Danish physician & naturalist.*

Abildgaard was the son of Søren [see next entry]. He was educated at the Veterinarian School in Lyon. He authored many works on medicine, zoology, etc., and gave in 1796 a description of the *Megatherium* at the same time as Georges Cuvier. Abildgaard was a secretary of the Academy of Sciences, Copenhagen, and he founded and directed the Veterinary School of Copenhagen. In mineralogy he was the first to examine and report on the mineral species Cryolite found in Greenland.

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1. — German, 1801 [First separate issue].

Ueber Norwegische Titanerze und eine neue Steinart (Kryolith) aus Grönland, welche aus Flusspathsäure und Alaunerde besteht. Aus dem Dänischen übersetzt von Moritz Heinrich Mendel. Copenhagen, 1801.

8°: 10 p.

VERY RARE. First separate appearance in German translation by Moritz Heinrich Mendel [see note below] of the article "Om Norske Titanertser och om en

nye Steenart Kryolith fra Grønland, som bestaar af Flusspatsyre og Alunjord" (see: *Videnskabernes Selskabs Skrifter* (Danske), 3 (1800), 305-316). The text describes two mineral species: (1) sphene crystals found in Norway, and (2) the new mineral species cryolite found in Ivigtut, Greenland. Abildgaard was the first researcher to examine the mineral samples brought back from Greenland by Andrade and named the new species he discovered Kryolith or Iissteen (from the Greek κρυος meaning ice). Abildgaard performed chemical analysis of the minerals and found that cryolite contained aluminum and hydrofluoric acid.

Moritz Heinrich Mendel. (BORN: Breslau, Germany, 1777; DIED: Breslau, Germany, 3 December 1813) *German physician.* Mendel received his medical degree in 1811, and he was named professor of the new University in Breslau. He became director of the cities medical clinic and was named an advisor on medical subjects. However, his life was cut short when while fighting an outbreak of typhus, he contracted the disease.

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SØREN ABILDGAARD

ABILDGAARD, Søren. (BORN: Flekkefjord, Denmark [now Norway], 18 February 1718; DIED: Copenhagen, Denmark, 2 July 1791) *Danish draughtsman, mineralogist & naturalist.*

Abildgaard matriculated at the University in Copenhagen in 1737 and became interested in the natural

ABILDGAARD

sciences and particularly in its practical application. After he left school, Abildgaard supported himself through his capabilities as an expert draftsman and painter. Over 900 of his drawings are preserved in Danish museums.

REFERENCES: *Baltisches Biographisches Archiv*: I 1, 366. • *Dansk Biografisk Haandleksikon*: 1, 8, portrait. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 116-24, portrait. • Poggendorff: 1, cols. 4-5. • Thomas, *Dictionary of Biography*, 1884: 35. • WBI.



BESKRIVELSE, 1759

2. — Danish, 1759 [First edition].

Søren Abildgaards | Beskrivelse | over | Stevens Klint | og | dens naturlige | Mærkværdigheder, | oplyst og udført med | Mineralogiske og Chymiske | Betragtninger, | samt forsyned med fornødne Kobberstykker. | [rule] Imprimatur, B. Möllmann. | [ornate rule] | København, 1759. | trykt hos L.N. Svare, boende i Skindergaden.

8°: π^3 A-C⁸ χ^1 ; 28 ℓ .; [6], [1]-50 p., 3 folding plates. PAGE SIZE: 225 x 170 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], Dedication, signed Søren Abildgaard, 31 March 1759.; [1]-50, Text.; [At end], 3 plates.

VERY SCARCE. A visit to the chert and fossil bearing chalk beds of Stevn Klint situated south of Copenhagen along Denmark's Baltic coast prompted Abildgaard to write in 1759 the first geological account of this interesting formation. Dedicating the book to King Frederick the Fifth, a description of the area is provided, including mineralogical and chemical

observations on the chert nodules, fossil shells and the surrounding material. Abildgaard speculates that the chert is actually petrified soil. At the end of the volume are bound three plates engraved from the author's original drawings that show panoramas of the beds and on plate 3, various fossil shells found in the strata. Abildgaard also indicates he plans to write another book describing a similar formation in Møns, which was published as *Physisk-Mineralogisk Beskrivelse over Moens Klint* (København, 1781) [which see entry below].

Modern geochemical research on specimens from Stevn Klint, a famous and classic formation, show that at the Cretaceous-Tertiary boundary, there is a high saturation of iridium and gold. This together with the presence of meteoric proportions of other metals provides further evidence of an asteroidal impact in the earth's distant past.

REFERENCES: *Bibliotheca Danica*: 2, 201. • BL: [B.371.(6.)]. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 116-24. • *Lærde Efterretninger*. Copenhagen: 1759, no. 28 [review]. • LKG: XIV 9. • *Fortgesetzte Nachrichten* (edited by J. Lorck). Copenhagen & Leipzig: 2, 210-3 [review]. • NUC: 2, 13 [NA 0024562].

3. German transl., 1764: Søren Abildgaards | Beschreibung | von | Stevens Klint | und dessen | natürlichen Merkwürdigkeiten, | mit | mineralogischen und chymischen Betrachtungen | erläutert, | und mit Kupferstichen versehen. | [rule] | Aus dem Dänischen übersetzt. | [ornament] | Copenhagen und Leipzig, | verlegt Franz Christian Mummens Witwe. | 1764.

8°: A-E⁸ F⁴; 44 ℓ .; [1]-88 p., 3 folding plates. Engraved head piece.

CONTENTS: [1-2], Title page, verso blank.; [3]-88, Text.; [At end], 3 folding plates.

VERY SCARCE. German translation of *Beskrivelse over Stevens Klint* (Kjøbenhavn, 1759), which contains no additional material, but includes reproductions of the three plates found in the original edition.

REFERENCES: *Berlinische Sammlungen*: 9, 428. • *Berlinischer Magazin*: 1, 241. • *Bibliotheca Danica*: 2, 201. • BL: [572.c.28.]. • BMC: 1, 4. • Cobres, *Deliciae Cobresianae*, 1782: 1, 258. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 80. • LKG: XIV 10a. • *Mart. Verz.*: 2, 111. • NUC: 2, 13 [NA 0024561]. • Roller & Goodman, *Catalogue*, 1976: 1, 3. • Schröter's *Journal für die Liebhaber*: 4, 1.

4. — German, 1765 [First separate edition].

Søren Abildgaards | Abhandlung | vom | Torf. | [double rule] | Aus dem Dänischen überstzt. | [ornate rule] | Copenhagen, | bey Franz Mummens Wittwe, | 1765.

8°: A-E⁸ F⁷; 47 ℓ .; [1]-94 p.

CONTENTS: [1-2], Title page, verso blank.; [3-4], "Vorbericht | des Uebersetzers."—dated 30 November 1764.; [5]-94, Text.

RARE. German translation by the author(?) of a paper concerning peat, its occurrences, uses and economics. The original Danish version of this work appeared as "Afhandling om Tørv" in *Pontoppidans Danmarks og Norges oeconomiske Magazin*, 6 (1761), 297-330. Gatterer (1798-9) says of this translation that it "contains nothing new, and is unnecessary" owing to

J.H. Degner's *Physische und chymische Erörterung vom Torf* (Frankfurt und Leipzig, 1731).

REFERENCES: *Allgemeine Deutsche Bibliothek*: 4, no. 1, 294-5. • *Bibliotheca Danica*: 2, 206. • BL: [967.h.12.(4.)]. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 186. • LKG: XVI 442. • NUC: [no copy listed].

5. — Danish, 1781 [First edition].

Physisk=Mineralogisk | Beskrivelse | over | Moens Klint ved S. Abildgaard. | [ornament] | [rule] | Med Kobber. | [double rule] | Kiøbenhavn, 1781. | Christian Gottlob Prosts Forlag.

8°: [1]-70 p., 2 plates.

VERY SCARCE. The first work to deal with the white chalk cliffs on the coast of the island of Moën (now Møn) in southeastern Denmark. Its emphasis is placed on the origin and nature of the flint layers that occur within the chalk. The plates show panoramas of the cliffs that reproduce original drawings by the author.

REFERENCES: *Bibliotheca Danica*: 2, 201. • BL: [987.a.23.]. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 116-24. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 81. • LKG: XIV 12c. • NUC: [no copy listed].

6. German transl., 1783: Physikalisch = mineralogische | Beschreibung | des | Vorgebirges auf der Insel | Møen | von | S. Abildgaard. | [rule] | Aus dem | Dänischen, nach den neuesten Berichtigungen | und Verbesserungen der Verfassers, | übersetzt | von Christian Heinrich Reichel. | [rule] | Mit Kupfern. | [double rule] | Kopenhagen, 1783. | bey Christian Gottlob Prost, | Königlich=Dänischem Universitätsbuchhändler.

8°: [10], 61, [1] p., 2 folding plates. PAGE SIZE: 165 x 105 mm.

RARE. German translation by Christian Heinrich Reichel [see note below] of *Physisk-mineralogisk Beskrivelse over Moëns Klint* (Kiøbenhavn, 1781), with additions and corrections provided by the author. The plates are reproduced from the original edition and show panoramas of the cliffs.

Christian Heinrich Reichel. (BORN: Leipzig, Germany, 13 April 1734; DIED: Zittau, Germany, 1807) *German teacher & translator.* Reichel was first an instructor in Danish and Swedish in Leipzig, before becoming in 1794 an instructor of the French language at the gymnasium in Zittau. He rendered many translations from Swedish and Danish into German.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 8 (1784), 570-1. • *Bibliotheca Danica*: 2, 201. • BL: [B.383.(1.)]. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 1, 46-9. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 116-24. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 81. • Hoover Collection: no. 3. • *Lærde Efterretninger*. Kopenhagen: 1784, p. 119. • LKG: XIV 13d. • NUC: 2, 13 [NA 0024563]. (Reichel) DBA: I 1011, 23-35. • Ehrencron-Müller, *Forfatterlexikon*, 1974-89: 6, 442. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.

ACCUM, Friedrich Christian. (BORN: Bückeburg, Saxony, Germany, 29 March 1769; DIED: Berlin, Germany, 28 June 1838) *German chemist & mineralogist.*

In 1793, Accum moved to London, where in 1800, he established a laboratory and laboratory supply business. He became the scientific lecturer at the Surrey Institute in 1803, and was hired as an advocate for the use of gas in lighting. Through this connection, he became a "practical chemist" for the London Gaslight Company in 1812. A position as librarian for the Royal Institution proved to be



ACCUM

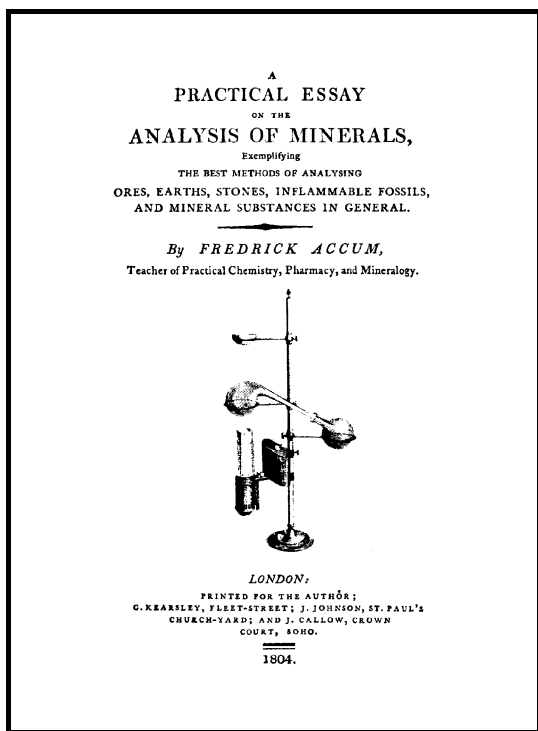
a disaster when his enemies accused him of damaging the books. This made Accum an outcast in London scientific circles, and as a result he had to reestablish himself in Berlin in 1822. From 1822 to 1838 he was a professor at the Gewerbe-Institute in Berlin. Accum held membership in the Royal Irish Academy, the Linnean Society of London and the Royal Academy of Sciences, Berlin.

REFERENCES: ADB: 1, 27. • Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 4, 113-119; 1214, 90; II 1238, 278. • Browne, C.A., "The life and chemical services of Fredrick Accum," *Journal of Chemical Education*, 2 (1925), 829-51, 1008-34 & 1140-9. • Browne, C.A., "Recently acquired information concerning Fredrick Accum," *Chymia*, 1 (1948), 1-9, portraits. • Callisen, *Medicinisches Schriftsteller-Lexicon*, 1830-45: 1, 22-5 & 26, 7-8. • DBA: I 3, 154-164; II 5, 6-9. • *Deutsche Apotheker Biographie*: 1, 1. • DNB: 1, 57. • Drugulin, *Sechstausend Portraits*, 1863: no. 8. • DSB: 1, 43-4 [by A. Thackray]. • Ferchl: 1-2. • Fruton, *Bio-Bibliography*, 1982: 3. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 44-5. • Ireland, *Index to Scientists*, 1962: 4. • *ISIS*, 1913-65: 1, 8. • *Journal of Nutrition*: 89 (1966), 3-8 [by F.C. Bing]. • NDB: 1, 27 [by F. Klemm]. • Poggendorff: 1, cols. 6-7 & 7a Suppl., 15. • Schaedler, *Biographisch Handwörterbuch*, 1891: 1. • Thomas, *Dictionary of Biography*, 1884: 42. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: 7.

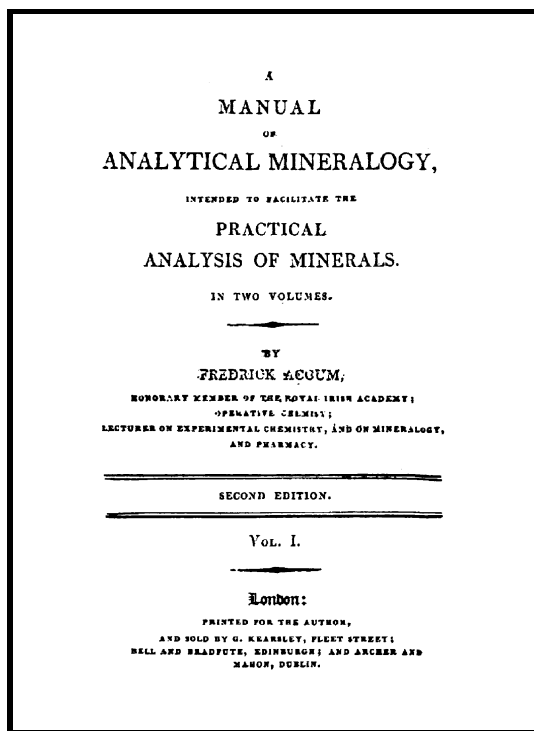
7. — English, 1804 [First edition].

A | Practical Essay | on the | Analysis of Minerals, | Exemplifying | the Best Methods of Analysing | Ores, Earths, Stones, Inflammable Fossils, | and Mineral Substances in General. | [tapered rule] | By Fredrick Accum, | Teacher of Practical Chemistry, Phramacy, and Mineralogy. | [vignette] | London: | Printed for the Author; | G. Kearsley, Fleet-Street; J. Johnson, St. Paul's | Church-Yard; and J. Callow, Crown | Court, Soho. | [double rule] | 1804.

12°: π^4 a⁶ b² A-E⁶ F² 2D⁴ G-Q⁶; 108ℓ.; [i]-vi, [2], [i]-xvi, [1]-183, [i]-ix p., one text illustration



PRACTICAL ESSAY, 1804



MANUAL, 1808

(p. 16, "Portable Universal Furnace"), title page figure of chemical apparatus. PAGE SIZE: 174 x 100 mm.

CONTENTS: [i-ii], Blanks.; [iii-iv], Title page, verso printer notice.; [v]-vi, "Preface."; [vii], "Errata."; [viii], Blank.; [i]-xvi, "Table of Contents."; [1]-183, Text.; [i]-vi, "Chemical Demonstrations or Private Lectures on Practical Chemistry."; vii-ix, "A List of Chemical Preparations."

SCARCE. This is a popular-style textbook describing the techniques used in the chemical determination of minerals. The preface gives the impression that the book was available only to pupils attending Accum's lectures, including the Americans Benjamin Silliman and William Peck; however, it appears to be common for this to be true. After a short description of the apparatus and general technique of mineral analysis, the first part of the book briefly describes the methods for analyzing the ores of twenty-two metals. The second part of the treatise is devoted to the analysis of the so-called earths, which in reality are natural oxide compounds of silica, aluminum, calcium, magnesium, strontium, barium, etc. This section also contains an interesting chemical examination of various soils. Part three discusses the analysis of mineral salts and the fourth part the examination of inflammable fossils or coal.

REFERENCES: BL: [990.a.12.]. • BMC: 1, 8. • *Freilich Sale Catalog*: no. 3. • NUC: 2, 593-6. • *Roller & Goodman, Catalogue*, 1976: 1, 8.

8. 2nd edition, 1808: A | Manual | of | Analytical Mineralogy, | intended to facilitate the | Practical | Analysis of Minerals. | In Two Volumes. | [tapered rule] | By | Fredrick Accum, | Honorary Member of the

Royal Irish Academy; | Operative Chemist; | Lecturer on Experimental Chemistry, and on Mineralogy, | and Pharmacy. | [double rule] | Second Edition. | [double rule] | Vol. I. | [tapered rule] | London: | Printed for the Author, | and Sold by G. Kearsley, Fleet Street; | Bell and Bradfute, Edinburgh; and Archer and Mahon, Dublin.

2 vols. [VOL 1] 12°: [a]⁶ b² 2b⁴ B-Z⁶ Aa-Dd⁶; 168ℓ.; [2], [i]-xvi, [iii]-xvii, [1], [1]-311, [312] p., engraved frontispiece showing various balances and furnaces; [VOL 2] 12°: π¹ Ee-Zz⁶ Aaa⁶ Bbb⁴; 125ℓ.; [2], 313-562 p., engraved frontispiece showing a portable forge. The table of contents of the second volume appears to have been intentionally placed after the table of contents of the first volume at the time of binding. PAGE SIZE: 175 x 98 mm.

CONTENTS: [Vol 1] [2 pg], Half title page, "Manual of Analytical Mineralogy by Frederick Accum. The Second Edition with Plates," verso advertisements for two other works by Accum.; [i-ii], Title page, verso "Hayden, Printer ..."; [iii], Dedication to Richard Kirwan.; [iv], Blank.; [v]-x, "Preface."—dated 1808.; [xi]-xiv, "Contents of the First Volume."; [iii]-xvii, "Contents of the Second Volume."; [1 pg], Notice of "A System of Mineralogy and Mineralogical Chemistry. With application to the Arts," soon to be published and the errata.; [1]-49, "Introduction."; 50-62, "General View of the Solid Part of the Earth."; [63]-76, "Systematic Distribution of Minerals."; 77-91, "Tabular View of Haüy's Methodical Distribution of Minerals."—as taken from 'A Synopsis of the Mineral Kingdom.'; [92]-311, "Part II. ... Metallic Minerals or Ores."; [312], Blank.

[Vol 2] [2 pgs], Title page, verso "Hayden, Printer ..."; [313]-506, "Part III. ... "Earthy Minerals, or Earths and Stones.""; 507-523, "Part IV. ... Mineral or Native Salts."; 524-532, "Part V. ... Inflammable Fossils."; [533]-555, "Part VI. ... Analysis of Mineral Waters."; [556], Blank.; [557]-560, "Description of the Plates."; [561]-562, "Chemical and Mineralogical Apparatus and Instruments."—Catalog

of items for sale.

SCARCE. This greatly enlarged book is a second edition of *A Practical Essay on the Analysis of Minerals* (London, 1804). Written in the author's eloquent and comfortable style, this work appeared in an era when mineralogical pursuits were a popular pastime throughout the British Isles, and this book no doubt helped cultivate that popularity.

The book begins with a dedication to RICHARD KIRWAN the great Irish mineralogist who by 1808 had probably ceased any activity in mineralogy. The preface then describes Accum's surprise at having the first edition sell out in 18 months. This of course spurred the preparation of this new edition. It has been completely rewritten and greatly enlarged by the inclusion of long quotations from MARTIN HEINRICH KLAPROTH's *Analytical Essays* (English trans., London, 1801-4) and the writings of other mineralogists and chemists. In fact, fully half of the text of the present volumes are the product of other authors that are liberally quoted to illustrate principles developed by Accum.

The book is arranged along the lines of the former edition. It contains concise descriptions for the analysis of metallic ores, earths, stones and other minerals. Numerous detailed instructions help guide beginners through mineralogical analysis. The following text is divided into six parts. The first provides a general introduction to mineralogy, including definitions, descriptions of mineral substances, reagents and necessary equipment. Broad views of the mineralogical classifications of Werner and Haüy are then given. Included are table representations based upon two broadsides outlining these classifications methods that had been published about 1805. Accum's use of these earlier publications perhaps point to him as their anonymous author. Part two describes the tests and procedures necessary for analyzing minerals for any of the 25 metals then known. Part three, which opens volume two, describes the analysis of earths and stones. Part four describes the process for analyzing mineral and native salts. Part five describes the same for inflammable fossils, while part six covers mineral waters. The work concludes with a description of the two plates.

REFERENCES: BL: [990.a.13.]. • BMC: 1, 8. • Cole, *Chemical Literature*, 1988: no. 4. • *Freilich Sale Catalog*: no. 4. • Hoover Collection: no. 7. • NUC: 2, 593-6 [NA 0042999].

9. **American issue, 1809:** *A Practical Essay | on the | Analysis of Minerals, | Exemplifying | the Best Methods of Analysing | Ores, Earths, Stones, Inflammable, Fossils | and | Mineral Substances in General. |* [double rule] | By Fredrick Accum, | Teacher of Practical Chemistry, Pharmacy, | and Mineralogy. | [double rule] | First American, from the London Edition. | [double rule] | Philadelphia: | Published by Kimber & Conrad, No. 93, Market | Street, and Benjamin & Thomas Kite, | No. 20, North Third Street. | [ornate rule] | 1809. | Brown & Merritt, Printers.

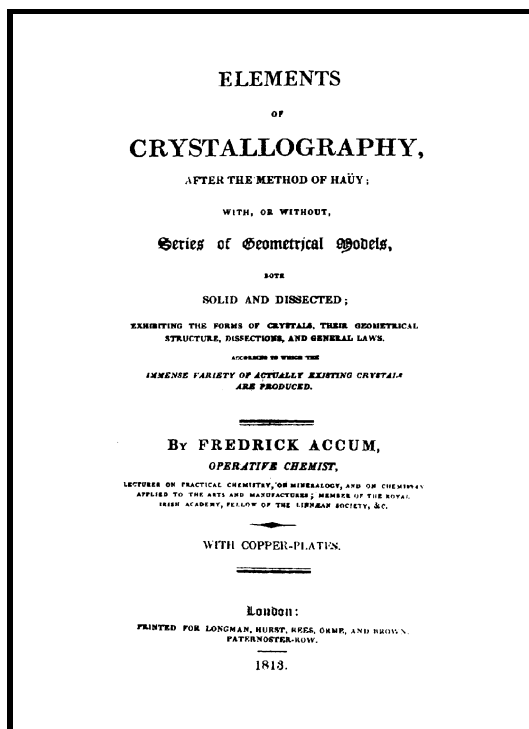
8°: A-T⁶ U⁴; 118ℓ.; [i]-xxiv, [25]-236 p., frontispiece plate showing a chemical retort setup. A plate of a furnace occurs on p. 42. PAGE SIZE: 165 x 95 mm.

CONTENTS: [i-ii], Half title page, verso blank; [iii-iv], Title page, verso blank; [v]-vii, "Preface."; [viii], Blank; [ix]-xxiv, "Contents."; [25]-50, "Introduction."; [51]-236, "General Classification of Minerals."

SCARCE. This is an American edition of the original 1804 issue published in London. The text has been completely reset and new plates created; however, the content is altered very little from the original.

REFERENCES: BL: [no copy listed]. • Hazen & Hazen, *American Geological Literature*, 1980: no. 15. • NUC: 2, 593-6. • Rink, *Technical Americana*, 1981: no. 774. • Shaw & Shoemaker, *American Bibliography*, 1958-83: no. 16788.

10. — English, 1813.



ELEMENTS OF CRYSTALLOGRAPHY, 1813

Elements | of | Crystallography, | after the Method of Haüy; | with, or without, | Series of Geometrical Models, | both Solid and Dissected; | Exhibiting the Forms of Crystals, their Geometrical | Structure, Dissections, and General Laws. | According to which the | Immense Variety of Actually Existing Crystals | are Produced. | [double rule] | By Frederick Accum, | Operative Chemist, | Lecturer on Practical Chemistry, on Mineralogy, and on Chemistry | applied to the Arts and Manufactures; Member of the Royal | Irish Academy, Fellow of the Linnæan Society, &c. | [tapered rule] | With Copper Plates. | [double rule] | London: | Printed for Longman, Hurst, Rees, Orme, and Brown, | Paternoster-Row. | [rule] | 1813.

8°: [a]⁷ b-z⁸ Aa-Bb⁸ Cc⁴ Dd²; 205ℓ.; [i]-lxiii, [1], [1]-396 p., frontispiece, 3 folding plates. PAGE SIZE: 212 x 127 mm.

CONTENTS: [i-ii], Half title page, "Accum's | Elements of Crystallography; | with or without | Series Of Geometrical Models, | and | With Plates And Wood-Cuts," verso blank; [Frontispiece]; [iii-iv], Title page, verso blank; [v]-vi, Dedication to Earl Percy, Count Münster Meinhovel, Sir John Borlase Warren and Sir John Saunders Sebright.; [vii]-xv, "Preface."; [xvi], Instructions to the binder.; [xvii]-xli, "Contents."; [xlii], Blank.; [xliii]-lii, "List of Crystallographic Models, both solid and dissected referred to in this work."; lii-lxiii, "Models Illustrative of Crystallography."; [1 pg],

ACCUM

"Notice."—dated 14 March 1813.; [1]-391, Text.; [392]-396, "Mineralogical Chests, Chemical Preparations and Apparatus manufactured and sold by Accum and Garden, Operative Chemists."; [At end], 3 folding plates.

PLATES: The 4 plates, numbered Pl. I to Plate IV, are all signed Lowry sculp. At the top of each is the description, "Accum's Crystallography." No information about the illustration appears on the plates themselves. Pl. I. (frontispiece), Dissected scalenohedron of Haüy. Pl. II., Basic crystallographic shapes (9 figs., folding plate). Pl. III., Dissected octahedron and pyritahedron of Haüy (2 figs.). Plate IV., Wollaston reflecting goniometer.

SCARCE. The first independent textbook published in English to describe the crystallographic theories of RENÉ JUST HAÜY. The work is dedicated to Earl Percy, Count Münster Meinhovel, Sir John Borlase Warren and Sir John Saunders Sebright who were among the students Accum taught. The text describes in detail Haüy's ideas on crystallography. In 1784, Haüy had first published his ideas in the *Essai d'une Théorie sur la Structure des Crystaux* (Paris, 1784). In this work, Haüy brought together the advances in crystallography made by Romé de l'Isle, Bergman and others into a coherent structural theory, based upon the idea of a microscopic "molecule integrante." This polyhedral unit contained all the elements of the macro crystal, and Haüy's model depicted crystals as built up out of these molecular units. Haüy also theorized a common "nucleus" or "primitive form" for all crystals of the same mineral species. This primitive form was thought to be revealed by cleavage of a crystal symmetrically along its angles and edges. Haüy's theory of crystal structure changed little in its essentials during the remainder of his career, and it is that theory that Accum describes in this work. The text is illustrated with diagrams and four plates which help describe principles outlined in the text. Ever the businessman, Accum also includes at the end an interesting sales catalog describing a wide variety of mineralogical apparatus, including various crystal models that Accum stocked in his Soho shop.

REFERENCES: BMC: 1, 8. • Hoover Collection: no. 6. • NUC: 2, 593-6. • Roller & Goodman, *Catalogue*, 1976: 1, 8.

11. — English, 1812 [First edition].

Descriptive catalogue of the apparatus and instruments employed in experimental and operative chemistry, in analytical mineralogy, and in the pursuits of the recent discoveries of electro-chemical science ... Manufactured and sold by Accum and Garden, operative chemists ... [By Friedrich Christian Accum.] London, W. Hayden, printer, 1812.

8°: [2], 59, [1] p., 16 plates.

VERY SCARCE. Accum was one of the premier suppliers of chemical and mineralogical apparatus in London during the first decades of the nineteenth century. This trade catalog of the apparatus, chemicals, etc that were sold by the firm of Accum and Garden. There are described and listed 328 pieces of apparatus and 340 chemicals.

12. Another issue, 1816: Descriptive | Catalogue | Of The | Apparatus & Instruments | Employed In | Experimental And Operative | Chemistry, | In Analytical Mineralogy, | And In The | Pursuits Of The Recent Discoveries | Of | The Recent Discoveries | Of | Voltaic Electricity. | [short rule] | Manufactured And Sold | By Accum And Garden, | Operative Chemists, | Compton Street, Soho, London. | [short rule] | 1816.

8°: π¹ B-F⁶; 31ℓ.; [2], [1]-59, [1] p. COLOPHON: (p. 59) London:—Printed by G. Hayden, printer. PAGE SIZE: 192 x 116 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-43, "Chemical | Apparatus And Instrumts."; 44-47, "Chemical Chests."; 48-50, "Chemical Preparations | For Philosophical Amusement."; 51-54a, "Chemical Preparations | Employed | In Philosophical Chemistry, In | Mineralogy, &c."; 54b-59, "Directions | For | Fitting Up A Laboratory ..."; [1 pg], Publisher's list.

VERY SCARCE. This edition was appended at the end of the author's *Practical Essay on Chemical Re-Agents* (London, 1816), and lists blow-pipes, balance, voltaic piles, diamonds, test papers, and many and various chemical compounds for sale by Accum and Gardner.

REFERENCES: BL: [957.1.30.; appended at end]. • NUC: 2, 593-6.

13. — English, 1809.

Analysis | Of A | Course Of Lectures | On | Mineralogy, | And On | The Chemical Examination Of Minerals; | With Application To | The Arts And Manufacturers. | To Be Delivered In The | Surrey Institution, | By Fredrick Accum, M.R.I.A. | Operative Chemist. | [...4 lines of titles and memberships...] | [double rule] | London: | Printed by R. Edwards, Crane Court, Fleet Street; | And Sold At The Surrey Institution; Also, By Callow, | Crown-Court, Prince's-Street, Soho; Murray, | Fleet-Street; Maxwell And Wilson, | Skinner-Street, Snow-Hill; And | Asperns, Cornhill. | 1809. | Price One Shilling And Sixpence.

8°: A-B⁸ C⁷; 23ℓ.; [1]-45, [1] p.

VERY RARE. It is known that in 1808 or 1809 Accum circulated a one page advertisement, "Lectures on practical chemistry and analytical mineralogy, announcement of annual courses." The present work is the syllabus to these lectures. It was enlarged and reprinted in 1810 under the title, *Manual of a Course of Lectures on Experimental Chemistry and Mineralogy* (London, 1810).

REFERENCES: BL: [T.255.(4.)].

14. — English, 1810.

Manual | Of | A Course Of Lectures | On | Experimental Chemistry, | And On | Mineralogy; | Containing In The Form Of Axioms And Concise Outlines | The Elements And Fundamental Truths Of Chemical And | Mineralogical Science. | Intended To Illustrate | The Lectures delivered on these Branches of Knowledge in | The Theatre | Of | The Surry Institution, | [tapered rule] | With An Account Of The Action Of | Chemical Tests

| And Modes Of Applying Them In The Practice Of The Science. | [tapered rule] | By Fredrick Accum, | Operative Chemist. | [...5 lines of titles and memberships...] | [double rule] | London: | Printed by G. Hayden, 4, Brydges Street, Covent Garden; | And Sold By G. Kearsley, Fleet Street; And J. Callow, | Crown Court, Princes Street, Soho. | 1810.

12°: iv, 190, 28 p.

VERY RARE. In 1809, Accum prepared *Analysis of a Course of Lectures on Mineralogy* for a series of courses he was preparing to present in 1810. The described title is the textbook used during the course. It appears to be an expanded version of the aforementioned *Analysis* with more detail and wide margins for students to scribble notes.

REFERENCES: BL: [990.a.15.]. • NUC: 2, 593-6.

15. — English, c1800.

Synopsis of the Mineral Kingdom, according to the methodical distribution of the Abbé Haüy. London, c1800.

Broadside.

RARE. Accum in the second edition of his *Analytical Mineralogy* (2 vols., London, 1808) makes use of this work to prepare his own table of the distribution of the mineral kingdom. This broadside was probably prepared by Accum.

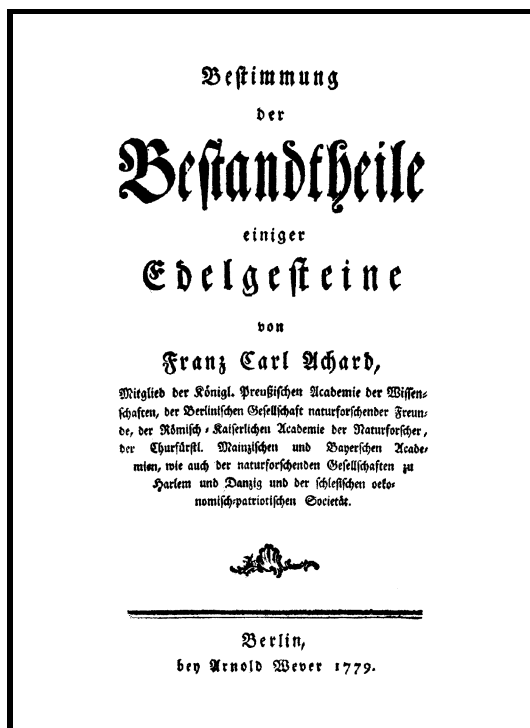


ACHARD

ACHARD, Franz Carl. (BORN: Berlin, Germany, 28 April 1753; DIED: Kunern near Breslau, Silesia, Germany, 20 April 1821) *German chemist.*

Achard was hired as an aide to Andreas Sigismund Marggraf [1709-1782] at the Academy of Sciences, Berlin in 1776. After showing his merit as a chemist, he was appointed director of the "Class of Physics" at the Academy in 1782. Achard developed a commercial process to extract sugar from beets, and his essays on the process greatly contributed to promote the manufacturer throughout Europe especially Germany and France. He held membership in many learned bodies, including the Royal Academy of Sciences at Berlin to which he was elected in 1776.

REFERENCES: ADB: 1, 27. • Aykroyd, *Story of Sugar*, 1967: p. 97-8. • Baxa, J. and G. Bruhns, *Zucker im Leben der Völker*. Berlin, 1967: 99-119 & 128-39. • DBA: I 3, 187-188; 3, 190; II 5, 37-38, 44-90. • Drugulin, *Sechstausend Portraits*, 1863: nos. 10-2. • DSB: 1, 44-5 [by J.B. Gough]. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 1, 9. • Lippmann, E.O.v., "Achard als Physiker," *Z. Wirtsch. Zuckerind., Tech. Teil*, 89 (1939), 33-43. • Lippmann, E.O.v., "Franz Karl Achard, der Begründer der Rübenzucker-Industrie," *Geschichtsbibl. Tech. Ind.*, 3 (1916), 2-8. • Lippmann, E.O.v., "Ein kleiner Beitrag zur Frage Hermbstädt-Achard," *Deut. Zuckerind.*, 1930, 167. • Lippmann, E.O.v., *Geschichte der Rübe (Beta) als Kulturpflanze von den ältesten Zeiten an bis zum Erscheinen von Achard's Hauptwerk (1809)*. Festschrift zum 75jährigen Bestande des Vereins der deutschen Zuckerindustrie. Berlin, J. Springer, 1925. viii, 184 p., illus. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 128-9. • NDB: 1, 27-8 [by J. Baxa]. • Poggendorff: 1, col. 7. • Schaedler, *Biographisch Handwörterbuch*, 1891: 1. • *Schlesische Lebensbilder*: 4, 200-18. • Speter, M., "Achard," *Zentralblatt Zuckerindustrie*, 1938, no. 20b, 493-502, 6 figs. • Speter, M., "Achard. Vom Bekanntwerden seiner Versuche von 1799 in Frankreich und in England," *Zentralblatt Zuckerindustrie*, 46 (1938), 4 p. • Speter, M., "Bibliographie von Zeitschriften-, Zeitungs-, Bücher-, Broschüren- und dgl. Veröffentlichungen Franz Carl Achards," *Deutsche Zuckerindustrie*, 6 (1938), 69-74 & 315-8. • Speter, M., "Guillaume-Wilhelm Achard (1716-1755), Franz Carl Achards Vater!," *Deutsche Zuckerindustrie*, 6 (1938), 507-9. • Stieda, W., *Franz Karl Achard und die Frühzeit der deutschen Zuckerindustrie*. Leipzig, S. Hirzel, 1928. [1]-218 p. [Published as: *Abhandlungen der Philologisch-historischen Klasse der Sächsischen Akademie der Wissenschaften*, vol. 39, no. 3.]. • Thomas, *Dictionary of Biography*, 1884: 42. • WBI. • *Webster's Biographical Dictionary*: 8. • *World Who's Who in Science*: 7.



BESTIMMUNG DER BESTANDTHEILE, 1779

ACHIARDI

16. — German, 1779 [First edition].

Bestimmung | der | Bestandtheile | einiger | Edelsteine | von | Franz Carl Achard, | [...7 lines of titles and memberships...] | [ornament] | [double rule] | Berlin, | bey Arnold Wever 1779.

8°: A-H⁸; 64ℓ.; [1]-128 p., 2 folding plates (chemical apparatus). PAGE SIZE: 200 x 122 mm.

VERY SCARCE. Among the earliest systematic attempts at analyzing gemstones was *Bestimmung der Bestandtheile einiger Edelsteine*. Sinkankas (1981) notes that Achard performed essentially the same kind of analysis as Bergman described the next year, and for which Bergman has been given all credit; however, Achard was not the careful technician Bergman was and his results were badly contaminated. In this work, Achard records his analyses of sapphire, ruby, zircon, emerald, garnet, and chrysoprase determined the presence of silicon, calcium, magnesium, and iron in his specimens, but as in the case of zircon where the zirconium was completely overlooked, many of the analyses are wrong (Partington). This carelessness was due in most part to the analyses being conducted in an iron crucible, which undoubtedly contaminated the results, as well as the lack of experimental technique of the author. Another paper, continuing Achard's research, was published as "Chemische Untersuchungen der Edelsteine" (see: *Abhandlungen des München Akademie*, 1800, 219-350).

REFERENCES: *Allgemeine Deutsche Bibliothek*: 45, no. 1, 113. • BL: [B.404.(3)]. • BMC: 1, 8. • Cobres, *Deliciae Cobresianae*, 1782: 2, 737. • *Freilich Sale Catalog*: no. 5. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 19 ["Ganz vorzüglich lehrreich, und merkwürdig für Mineralogen und Chemiker."]. • LKG: XVI 238. • NUC: 2, 628. • Partington, *History of Chemistry*, 1961-70: 3, 593. • Sinkankas, *Gemology Bibliography*, 1993: no. 13. • Sinkankas, *Emerald and other Beryls*, 1981: 50.

17. French transl., 1783: Analyse | De | Quelques Pierres Précieuses: | Par M.F.C. Achard, Membre de l'Académie | [...4 lines of titles and memberships...] | Ouvrage traduit de l'Allemand, | avec des Remarques: | Par M.J.B. Dubois, Conseiller de la Cour de S.M. le | [...4 lines of titles and memberships...] | [ornament] | A Paris, | Chez Moutard, Libraire-Imprimeur de l'Académie Royale | des Sciences. | [double rule] | M. DCC. LXXXIII. | Avec l'Approbation & sous le Privilège de l'Académie | Royale des Sciences.

8°: a⁸ A-L⁸ M¹; 97ℓ.; [i]-xvi, [1]-178 p., tables. Title vignette, head and tail-pieces.

VERY SCARCE. French translation by Jean Baptiste Dubois [see note below] of *Bestimmung der Bestandtheile einiger Edelgesteine* (Berlin, 1779). Contains a preface and notes by Dubois, and reports to the Paris Academy by Brisson, Macquer, de Fontanieu, and Cadet.

Jean Baptiste Dubois. (BORN: Burgundy, France, 1753; DIED: Paris, France, 1808) *French litterateur & agriculturist*. Dubois resided for a time in Poland, where he became councillor at court. After returning to Paris, he became a friend and assistant to Chrétien Guillaume Malesherbes [1721-1794]. After the reign of terror he held high office in the ministry of the interior. He wrote a notice of the life and labors of Malesherbes in 1806, among other works.

REFERENCES: BL: [234.h.8.]. • *Freilich Sale Catalog*: no. 6. • NUC: 2, 628. • Partington, *History of Chemistry*, 1961-70: 3, 593 [note 13]. • Roller & Goodman, *Catalogue*, 1976: 1, 8. • Sinkankas, *Gemology Bibliography*, 1993: no. 14 [not seen]. (Dubois) ABF: I 333, 377-389. • Beauchamp,

Biographie Moderne, 1816. • *Biographie Universelle*. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • Thomas, *Dictionary of Biography*, 1884: 795. • WBL.

18. — German, 1780.

Chymisch-physische Schriften. Berlin, Arnold Wever, 1780.

8°: [1]-367, [1] p., 10 folding tables.

VERY RARE. The collected chemical papers of Achard, including his paper "Von der Heilung eines Paralitici durch die Electricität" as well as others on electricity.

REFERENCES: BL: [1034.i.12.]. • NUC: 2, 628.

19. — German, 1784.

Sammlung physikalische und chemische Abhandlungen von Franz Carl Achard ... Erste Band. Berlin, Bey Johann Friedrich Unger, 1784.

8°: [1]-480 p., 2 folding plates.

VERY RARE. No more published. The collected scientific papers of Achard to be published in a multivolume set, but only the first volume ever appeared.

REFERENCES: BL: [1135.h.15.]. • *Catalog of the Edgar Fahs Smith Collection*: p. 5. • NUC: 2, 628.

ACHIARDI.

See: D'achiardi, Antonio.

ACHILLES, Alexander. (BORN: 1586?; DIED: Stockholm, Sweden, 1675) *Prussian military officer*.

Achilles was attached to the court of the King of Poland.

REFERENCES: DBA: I 3, 287-288. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • LKG: 278. • PBA: *Polskie Archiwum Biograficzne*: 1, 423-424. • *Polski Słownik Biograficzny* [Maybe?]. • WBL.

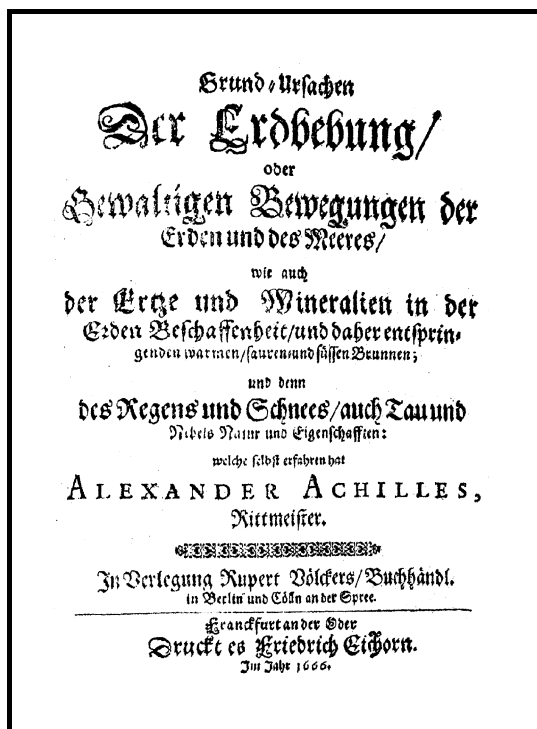
20. — German, 1666.

Grund=Ursachen | Der Erdbebung/ | oder | Gewaltigen Bewegungen der | Erden und des Meeres/ | wie auch | der Erzte und Mineralien in der | Erde Beschaffenheit/ und daher entsprin= | genden warmen/ sauren= und süßen Brunnen; | und denn | des Regens und Schnees/ auch Tau und | Nibels Natur und Eigenschafften: | welche selbst erfahren hat | Alexander Achilles, | Rittmeister. | [ornate rule] | In Verlegung Rupert Völckers/ Buchhändl. | in Berlin und Cölln an der Spree. | [rule] | Franckfurt an der Oder | Druckt es Friedrich Eichorn. | Im Jahr 1666.

4°: A-E⁴ F²; 22ℓ. PAGE SIZE: 186 x 132 mm.

CONTENTS: A1r, Title page.; A1v-A4r, Dedication to Friedrich Wilhelm, Margrave of Brandenburg.; A4v, "An den günstigen Leser &c."; B1r-F2v, Text.

VERY RARE. Within this account of the causes of earthquakes, Achilles includes many observations on the conditions that cause the formation of ores and minerals, and consequently the nature of warm, acid and sweet mineral springs. The observations are founded on the Aristotelian theory of four primary



GRUND-URSACHEN DER ERDBEBUNG, 1666

elements which in combination are the basis of the formation of all natural objects. The author also interjects many references to God and personal anecdotes into the text, which begins with a review of ancient philosophical theories on the earth, including the generation of minerals and ores.

REFERENCES: BL: [1033.h.10.(5.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 24. • LKG: III 54. • NUC: [no copy listed]. • VD17: 14:001028L.



ACKNER

ACKNER, Michael Johann. (BORN: Schässburg, Siebenbürgen, Hungary, 25 January 1782; DIED: Hemmersdorf near Hermannstadt, Germany, 12 August 1862) *Hungarian archaeologist.*

Studied in Wittenberg and Göttingen, becoming for 13 years Professor of Philosophy and Archaeology at the School in Hermannstadt. From 1821 he was an evangelist preacher in Hermannstadt.

REFERENCES: ADB. • Bermann, *Österreichs biographisches Lexikon*, 1851-2: 1 Heft. • DBA: I 4, 149-165; 1422, 95. • Lambrecht & Quenstedt, *Catalogus*, 1938: 2. • Österreich Biographisches Lexikon. • Poggendorff: 3, 9. • Trausch, *Schriftsteller-Lexikon*, 1868-2001: 1, 1-8. • Verhandlungen und Mitteilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt: 13 (1877), 123. • WBI. • Wollmann, V., *Johann Michael Ackner (1782-1862). Leben und Werk*, 1982, 282 p., 63 illus. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91: 1, 4.

21. — German, 1855.

Mineralogie | Siebenbürgens, | Mit | Geognostischen Andeutungen | Von | M.J. Ackner, | [...3 lines of titles and memberships...] | [rule] | Eine | vom Vereine zur Beförderung der siebenbürgischen Landeskunde | gekrönte Preisschrift. | [rule] | Mit einer geognostisch-oryktognostischen Karte Siebenbürgens. | [ornate rule] | Hermannstadt, 1855. | Druck und Verlag von Theodor Steinhausen.

8°: π^8 1-39⁸ 40⁴; 205^l.; [i]-xv, [1], [1]-391, [3] p., 8 folding plates, one map. PAGE SIZE: 224 x 132 mm.

CONTENTS: [i-ii], Title page, verso two lines of quotation signed Linnaeus.; [iii]-vii, "Vorwort."—dated 30 April 1844, "Nachschrift." (pages vi-vii) dated 30 July 1855.; viii, "Befolgte Namen-Abkürzungen."; [ix]-xv, "Inhalt."; [1 pg], Blank.; [1]-367, Text.; [368]-391, "Alphabetisches Register."; [1 pg], Blank.; [1 pg], "Druckfehler."; [1 pg], Blank.

PLATES: The 8 unsigned, folding lithographic plates are numbered Tab. I to Tab. VIII. Each shows figures of crystal drawings. The large (410 x 470 mm.), unsigned, folding map is titled: "Andeutungen | der | geognost-oryktognostischen Verhältnisse | Siebenbürgens."

SCARCE. This major topographical work covers the important mining region of the Siebenbürgen located in present day Romania. In the first part of the forward, Ackner outlines his goals and reasons for writing this book. He notes that no previous work had sufficiently described the mineralogical wonders of the area. He qualifies this view by providing a list of earlier titles, and outlining the comprehensive treatment he plans. Ackner began work in 1844, which is the first date of the forward. In the "Nachschrift" that immediately follows, he recounts how the first Heft of this book was published in 1847, and that it was only after eight years of thorough research that the volume was completed in 1855. The text is a descriptive mineralogy in the arrangement of C.S. WEISS' system of classification. Each species found in the region is provided a description giving copious notes about localities, associations, crystallography, and chemistry.

REFERENCES: BL: [7108.c.6.]. • BMC: 1, 9. • NUC: [no copy listed]. • Szinyei, *Hungarica Historiae Naturalis*, 1878: 1.

ACOSTA, José de. (BORN: Medina del Campo, Spain, c1539; DIED: Salamanca, Spain, 15 February 1600) *Spanish jesuit & geographer.*

Acosta, like his brother Cristobal [c1525-c1594], belonged to the Society of Jesus (Jesuits) and from 1571 to



ACOSTA

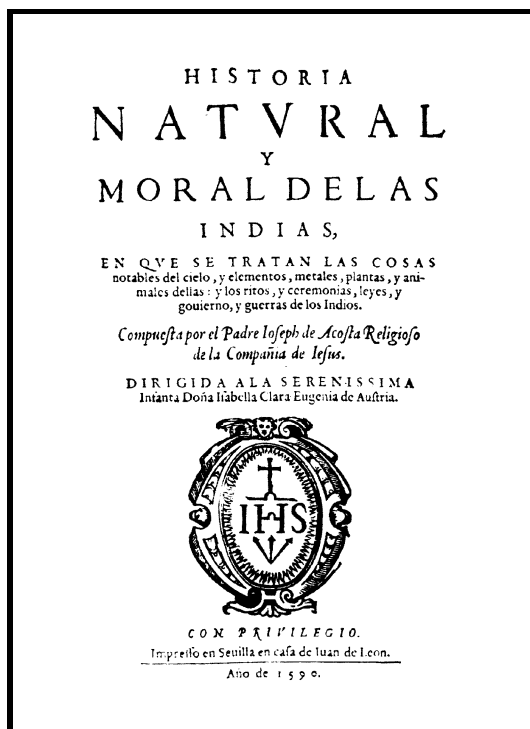
1587 he was stationed in the West Indies and Provinzial in Peru. He learned enough of both the Aymara and Quechua languages to write a trilingual catechism in 1583. When he returned to Europe, he was for a time assigned a post in Rome, but finally returned to Spain as a rector at the Jesuit college of Salamanca. For his writings which provided detailed images of the physical and human geography of Latin America, Acosta has been called the "Pliny of the New World."

REFERENCES: ABE: I 6, 295-337; 1049,329-334; II 9, 317-342; III 4, 314-432. • Alvarez Lopez, E. "La filosofía natural del Padre José de Acosta," *Revista de Indias*, 17 (1942), 5-12. • Burgaleta, C.M., *José de Acosta, S.J. (1540-1600): His Life and Thought*. Chicago, Loyola Press, 1999. xxxviii, 200 p. • Carricido, R., *El padre José de Acosta y su importancia en la literatura científica española*, Madrid, 1899. • *Catholic Encyclopaedia*. • *Diccionario Porrúa*. • DSB: 1, 48 [by G. Kish]. • *Encyclopaedia Britannica*, 11th edition. • Jarcho, S., "Origin of the American Indian as suggested by Fray José de Acosta (1589)," *Isis*, 50 (1959), 430-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • López Piñero, *Diccionario Histórico*, 1983: 1, ?? . • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 3-6. • Mayer, *Biobibliography of Medical Authors*, 1941: 13. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 132. • *Nouvelle Biographie Générale* (Hoefer). • Picatoste, *Biblioteca Científica Española*, 1891. • Pino-Díaz, F.d., "La renaissance et le nouveau monde: Jose d'Acosta, jésuite anthropologue (1540-1600)," *Homme*, 32 (1992), 309-26. • Poggendorff: 1, col. 9. • *World Who's Who in Science*: 423. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 4.

Spanish editions

22. — Spanish, 1590 [First edition].

Historia | Natvral | Y | Moral De Las | Indias, | En Qve Se Tratan Las Cosas | notables del cielo, y elementos, metales, plantas, y ani- | males dellas: y los ritos, y ceremonias, leyes, y | gouierno, y guerras de los Indios. | Compuesta por el Padre Ioseph de Acosta Religioso | de la Compañia de Iesus. | Dirigida A La Sereenissima | Infanti Doña Isabella Clara Eugenia de Austria. | [ornament] | Con Privilegio. | Impresso en Seuilla en casa de Iuan de Leon. | [rule] | Año de 1590.



HISTORIA NATVRAL, 1590

8°: A⁶ χ¹ B-Z⁸ Aa-Kk⁸ Ll⁶ Mm⁸ Nn¹⁰; 274ℓ.; [1]-12, [2], 13-535, [21] p. COLOPHON: Hispali, | Excudebat Ioannes Leonius. | Ano, 1590.

CONTENTS: [1-2/=A1], Title page, verso blank.; 3-4, "El Rey,"—signed Iuan Vazquez.; 5, "Yo Goncalo Davila."; 6, "Aprobacion."; 7-8, "A La Serenissima," dated March, 1590.; 9-12, "Proemio Al | Lector.;" [1 pg], "Yo Christoval De Leon."—signed Christoval de Leon.; [1 pg], Errata.; 13-535, Text of 7 books, dated at the end, 21 February 1589.; [1 pg/=Ll6v], Printer's device dated 1590.; [16 pg/=Mm1r-Nn8v], Index.; [3 pg/=Nn9r-Nn10r], Table of chapters related to Gensis, with printer's device at end.; [1 pg/=Nn10v], Blank.

RARE. Acosta's most important scientific work, *Historia natural y moral de las Indias* contains firsthand observations on many diverse phenomena witnessed by Acosta in the New World. Included are some of the earliest descriptions of altitude sickness, the nature and use of coca, farm techniques, crops, and domesticated animals of America. Also included are descriptions of Inca and Aztec history, religious observations, folk customs, and statecraft. Acosta includes detail about Mexican ideograms and Peruvian quipu and the Inca postal system.

The text consists of 7 books of which the first two are a Spanish translation of *De Natvra Nova Orbis Libri Dvo* (1st ed., Salmanticae, 1589) which was written during Acosta's stay in Perú, while the remainder of the work was written after he returned to Spain. Book 1 in 25 chapters discusses the sky, the stars, the Poles, knowledge of the ancient world of the New World, the land of Ophir, prophecies, the

aborigines of the New World, Atlantis and the origin of the Indians. Book 2 in 16 chapters describes the Tropics, meteorology and biology. Book 3 in 27 chapters concerns natural history, the weather, the Ocean and its straits, Florida, rivers and land Perú, New Spain and land still unknown, volcanoes, and earthquakes. Book 4 in 42 chapters covers minerals, metals, gold and silver, the mountains of Potosí, mines, metallurgy, use of metals, precious stones, pearls, plants (chapters 16-33), cacao (chapter 22), animals (chapters 34-42). Book 5 in 31 chapters, reviews Indian ethnology, religion, superstitions, and temples in Mexico. Chapter 6 in 28 chapters describes Mexican chronology, China, Chinese and Mexican writing systems, and the Incas. Book 7 in 28 chapters is a history of Mexico.

Facsimile reprint, 1977: [In black:] *Hispaniae Scientia* | [rule] | José de Acosta | [in red:] *Historia Natural y Moral* | De | Las Indias | [in black:] (Sevilla, Juan de León, 1590) | Introducción, apéndice y antología | por | Barbara G. Beddall | [ornament] | Valencia, 1977. 8°: [1]-129, [3], 1-535, [23] p. Title page in red and black.

CONTENTS: [1-3], Blanks.; [4], "Hispaniae Scientia."; [5], Half title page, "Historia Natural Moral De | Las Indias."; [6], Blank.; [7], Title page.; [8], "Printed in Spain."; [9], "Sumario | Contents."; [10], Blank.; [11], "El P. José De Acosta..."; 12-97, Extensive biographical introduction in Spanish with facing pages in English.; [98], Blank.; [99], "Apéndice | Appendix."; 100-107, List of plants and animals mentioned by Acosta and arranged alphabetically by their Spanish name, with English translation.; [108], Blank.; [109], "Antología | Anthology."; [110], Blank.; 111-129, "Scientific Contributions Of Father | José De Acosta."; [1 pg], Blank.; [1 pg], Sectional title page.; [1 pg], "Reproducción ..."; [Pages, 1-535, facsimile reproduction of the 1590 edition.]; [1 pg], Reprint information.; [1 pg], Blank.

A modern facsimile reprint with an extensive biographical and historical introduction, appendix, and anthology in Spanish and English.

REFERENCES: BL: [146.a.3.]. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 3-6, no. 13. • Mayer, *Biobibliography of Medical Authors*, 1941: no. 84.1. • NUC. • Picatoste, *Biblioteca Científica Española*, 1891: no. 10. • Roller & Goodman, *Catalogue*, 1976: 1, 9. • Sabin, *Dictionary*, 1868-1936: no. 121.

23. 2nd edition, 1591: *Historia natural y moral de las Indias* Barcelona, a Costa de Lelio Marini, Vaneciana, 1591.

8°: 345, [29]ℓ. VERY SCARCE.

REFERENCES: BL: [978.a.13.].

24. 3rd edition, 1608: *Historia natural y moral de las Indias*, en que se tratan las Cosas notables del cielo, y elementos, metales, plantas, y animales dellas: y los ritos, y ceremonias, leyes, y govieno, y guerras de los Indios. Madrid: Alonso Martin, 1608.

8°: [1]-535, [41] p.

VERY SCARCE. Sabin 121; JCB II:50; Brunet I, 41; Delgado-Gomez, Spanish Historical writing about the New World 44; Streeter Sale 32 (first English ed.).

Preceded by the first edition of 1590 and two editions of 1591, this is the first Madrid edition of the most important early source of information on the native Indians of Mexico and Peru.

REFERENCES: BL: [978.k.6.].

25. 6th edition, 1792: *Historia Natural y Moral de las Indias*, en que se tratan las cosas notables del Cielo, elementos, metales, plantas y animales de ellas; y los ritos, ceremonias, leyes, gobierno y guerras de los Indios ... Madrid, P. Aznar, 1792.

2 vols. [VOL 1] 4°: [xxii], 306 p. [VOL 2] 4°: [xii], 252 p.

VERY SCARCE. Sabin: "This is the best Spanish edition."

REFERENCES: BL: [9551.f.3.]. • Palau, *Manual*, 1948-77: no. 1983.

Italian edition

26. Italian transl., 1596: *Historia* | Natvrale, e Morale | delle Indie; | Scritta | Dal. R.P. Gioseffo di Acosta | Della Compagnia del Giesù; | Nellaquale si Trattano le Cose Notabili del Cielo, & de gli | Elementi, Metalli, Piante, & Animali di quelle: | i fuoiriti, & ceremonie: Leggi, & gouerni, | guerre degli Indiani. | Nouamente tradotta della lingua Spagnuola nella Italiani | Da Gio. Paolo Galvcci Salodiano | Academico Veneto. | Con Privilegii. | In Venetia, | Presso Bernardo Basa, All 'insegna del Sole, M,D,XCVI.

4°; [48] p., 173 numb.ℓ

VERY SCARCE. Translated by Giovanni Paolo Gallucci [see note below] from *Historia Natural y Moral de las Indias* (Madrid, 1590). The is the only Italian version, printed with the type of Aldus.

Giovanni Paolo Gallucci. (BORN: Salo near Brescia, Italy, 1538; DIED: 1631?) *Italian astronomer*. The Italian Gallucci was a renowned astronomer whose contributions, especially in the field of astronomical instruments, greatly advanced the scientific knowledge of the 16th and 17th centuries.

REFERENCES: BL: [T 39893.]. • Mayer, *Biobibliography of Medical Authors*, 1941: no. 84.4. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 124. • Wellcome Catalog (Books): 1, no. 22. (Gallucci) *Biographie Universelle*. • *Dizionario Biografico Italiani*. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 838-9. • WBI.

English edition

27. English transl., 1604: The | Naturall | and Morall Historie of the | East and West | Indies. | Intreating of the Remarkeable things of Heaven, of the | Elements, Mettalls, Plants and Beasts which are pro- | per to the Country: together with the Manners, | Ceremonies, Lawes, Governements, and Warres of the Indians. | Written in Spanish by Ioseph Acosta, and translated | into English by E.G. | [ornament] | London, Printed by Val. Sims for Edward Blount and William | Aspley, 1604.

8°: A⁴ B-Z⁸ Aa-Pp⁸ a-b⁴ (b⁴ blank); 307ℓ.; [8], 1-590 (i.e., 592), [16] p., title vignette, ornamental initials and head- and tailpieces, (misprinting 45 for 47, 48 for 50, 178 for 179, 179 as 178, 189-373 as 187-371, 376-377 as 374-375 and 380-592 as 378-590). PAGE SIZE: 188 x 134 mm.

CONTENTS: A1, Blank.; A2r, Title page.; A2v, Blank.; A3r, Dedication.; A3v-A4v, Advertisements.; 1-590 (i.e., 592/=B1r-Pp8v), Text.; a1r-b3r, Index.; b3v, Errata.; b4, Blank.

RARE. Translation attributed to Edward Grimston [see note below] from *Historia Natural y Moral de las Indias* (Madrid, 1590). This well known work is here for the first and only time translated into English.

Edward Grimston. (BORN: 1528?; DIED: 1599) *English bureaucrat*. Grimston studied at Gonville Hall, Cambridge and was appointed comptroller of Calais. After the capture of Calais by Guise he escaped in 1599 from Bastille to London. He was then appointed Muster-Master of the north in 1560. In 1563, he was elected a Member of Parliament. He was also employed as a spy by France.

REFERENCES: Cox, *Guide to the Literature of Travel*, 1948-50: 2, 254. • Hoover Collection: no. 9. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: 1, 4, no. 9. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 131. (Grimston) BBA: I 489, 439-442. • DNB. • WBI.

Dutch editions

28. Dutch transl., 1st edition, 1598: Historie Naturael | ende Morael van de We- | stersche Indien: | Waer inne ghehandelt wordt van de | merckelijckste dinghen des Hemels, Elementen, | Metalen, Planten ende Ghedierten van dien: als oock | de Manieren, Ceremonien, Wetten, Regeeringen | ende Oorloghen der Indianen. | Ghecomponeert door Iosephum de | Acosta, der Jesuitscher Oorden: | Ende nu eerstmael uyt den Spaenschen in onser | Nederduytsche tale overgheset: door Ian Huyghen | van Linschoten. | [ornament] | Tot Enchuysen, | By Jacob Lenaerts. Meyn. Boeckvercooper, | woonende op den hoeck van de Kerck brugge, | int Schrijfboeck. Anno 1598.

8°: a4 A-Ddd8; 404ℓ.; [7], 1-389, [8]ℓ., no pagination. Text in black letter with chapter heads and names in Roman. Colophon: "Ghedrukt t'Haerlem, | By Gillis Rooman, woo- | nende in de Jacobijne-strate, | in de vergulde Parsse. | Anno 1598."

CONTENTS: alr, Title page.; alv, Privilege, dated 8 October 1594.; a2r-a4r, Translator's preface to the senate of Enkhuizen, dated 1 May 1598.; a4v-A1v, Epigrams to the translator.; A2r-A3r, Preface of Acosta to the reader.; A3v, Two poems.; Folios 1r-213r, Text of Books, 1-4.; Folios 213v-214r, Preface to books 5-7.; Folios 214v-389r, Text of Books, 5-7.; Ccc8v-Ddd7v, Index.; Ddd8r, Errata.; Ddd8v, Blank.

SCARCE. Translation by J.H. van Linschoten [see note below] of *Historia Natural y Moral de las Indias* (Madrid, 1590).

Jan Hugo van Linschoten. (BORN: Haarlem, The Netherlands, 1563; DIED: Enckhuysen, The Netherlands, 1611) *Dutch seafarer.* Linschoten went to Goa in 1583, and remained there several years in the service of Archbishop Fonseca. After his return, he published in 1596 a popular account of his voyage, which is said to be reliable.

REFERENCES: Mayer, *Biobibliography of Medical Authors*, 1941: no. 84.6. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 126. (Linschoten) ADB. • BAB: 412, 348-374. • *Biografisch Woordenboek Nederland*. • DBA: I 769, 371. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 1470-1. • Thomas, *Dictionary of Biography*, 1884: 1436. • WBI.

29. Dutch transl., 2nd edition, 1624: Historie Naturael en Morael | van de Westersche Indien. | Waer inne ghehandelt wort van de merckelijckste dinghen | des Hemels, Elementen, Metalen, Planten ende Gedierten | van dien: als oock de Manieren, Ceremonien, Wetten, Regeeringen ende Oorloghen der Indianen. | Ghecomponeert door Iosephum de Acosta, der | Iesuytscher Oorden: Uyt den Spaenschen in onse Nederduytsche tale overgheset: | Door Ian Huyghen van Linschoten. | De tweede Editie | [ornament] | t'Amsterdam, | By Broer, Iansz. op de nieu-zijds achter Burgh-wal inde Silvere Kan, 1624.

4°: [8] p., 177 numb. ℓ., [6] p., 13 text woodcuts. VERY SCARCE.

French editions

30. French transl., 1st edition, 1598: Histoire | Natvrelle | et Moralle | des Indes, tant Orientales | qu' Occidentales. | Où il est traité des choses remarquables du Ciel, | des Elémens, Métaux, Plantes & Animaux | qui sont propres de ces pais. Ensemble des | mœurs, cérémonies, loix, gouvernmens & guerres des mesme Indiens. | Composée en Castilan par Ioseph Acosta, & | traduite en François par Robert | Regnault Cauxois | .Dedié av Roy. | A Paris, | Chez Marc Orry, M.D.XCVIII.

16°: [16], 375 p., table, 17ℓ.

SCARCE. Translation by Robert Regnault, a Minorite, from *Historia natural y moral de las Indias* (Sevilla, 1590).

REFERENCES: Mayer, *Biobibliography of Medical Authors*, 1941: no. 84.5. • Sabin, *Dictionary*, 1868-1936: no. 125.

31. French transl., 2nd edition, 1600: Histoire naturelle et morale des Indes, tant orientales qu' occidentales, ou il est traite des choses remarquables du ciel, des elemens, metaux, plantes & animaux qui sont propres de ces pais; ensemble des moeurs, ceremonies, loix, gouvernemens & guerres des mesmes indiens. Dernière ed., reveue & corrigee de nouveau. Paris, Marc Orry, 1600.

16°: [7]ℓ., 375 f., [17]ℓ. VERY SCARCE.

REFERENCES: Mayer, *Biobibliography of Medical Authors*, 1941: no. 84.7.

32. French transl., 3rd edition, 1606: Histoire natvrelle et morale des Indes, tant Orientales qu'Occidentales. Ou il est traite des choses remarquables du ciel, des elemens, metaux, plantes & animaux qui sont propres de ce pais. Ensemble des moeurs, ceremonies, loix, gouvernemens, & guerres des mesmes Indiens. Composee en castillan par Ioseph Acosta, & traduite en francois par Robert Regnault, Cauxois. Dernière ed., reveue & cor. de nouveau. Paris, M. Orry, M.DCVI.

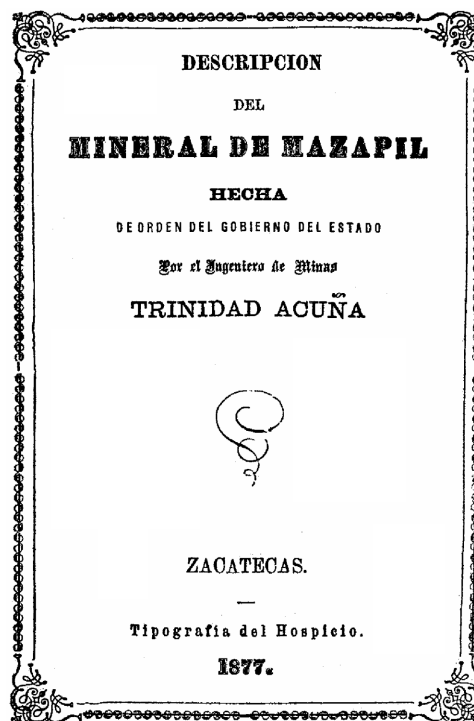
8°: [16], 352 (i.e., 354) numb.ℓ., [36] p. VERY SCARCE.

REFERENCES: NUC. • *Wheeler Catalogue*: 77.

33. French transl., 4th edition, 1616: Histoire Natvrelle et Morale des Indes, tant Orientales, qu' Occidentales ... Composee en Castillan ... & traduite en François par Robert Regnavld Cauxois. Dernière edition, reveue, et corrigee de nouveau. A Paris, Chez Adrian Tiffaine, 1616.

8°: [8], 375, [16]ℓ. Woodcut initials and headpieces. VERY SCARCE.

REFERENCES: BM/STC *French*: 99. • Hoover Collection: no. 9. • Wellcome Catalog (Books): 1, no. 24. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 178.



DESCRIPCION, 1877

ACUÑA, Trinidad. *Mexican mining engineer.*

34. — Spanish, 1877.

[Contained within an ornate box:] Descripción | Del
| Mineral De Mazapil | Hecha | De Orden Del
| Gobierno Del Estado | Por et Augeniera de Minas
| Trinidad Acuña | [ornament] | Zacatecas. | [short
rule] | Tipografia del Hospicio. | 1877.

8°: [1]-41 p.

VERY RARE. Topographical mineralogy giving descriptions of the minerals found in the Mazapil region of Mexico.

REFERENCES: BL. • NUC.

ADAM, Gilbert-Joseph. (BORN: 1795; DIED: Paris, France, 1881) *French mineral collector.*

Adam was general inspector of finance in Paris, as well as an honorary member of the Mineralogical Society of France. The Paris École des Mines [School of Mines] acquired his collection of 7,000 specimens. Adamite was named in his honor by C. Freidel, 1866.

REFERENCES: ABF: I 4, 72. • Glaeser, E., *Biographie nationale des contemporains*. Paris, 1878. 4,824 p. [French national biography of the 19th century.]. • Schenkenberg, *Die lebenden Mineralogen*, 1842: 1. • WBI.

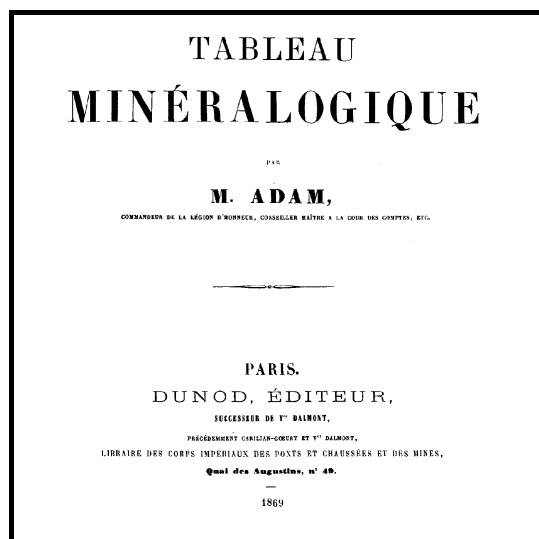


TABLEAU MINÉRALOGIQUE, 1869

35. — French, 1869.

Tableau | Minéralogique | par | M. Adam, |
| Commandeur de la Légion d'Honneur, Conseiller
| Maître à la Cour des Comptes, etc. | [ornate rule]
| Paris. | Dunod, Éditeur, | Successeur de Vof
| Dalmont, | Précédemment Carilian-Goeuryet Vof
| Dalmont, | Libraire des Corps Impériaux des Ponts
| et Chaussées et des Mines, | Quai des Augustins,
| n° 49. | [rule] | 1869.

Oblong 4°: π^2 1-14⁴; 58 ℓ .; [4], I-IX, [1], [1]-102 p., originally bound in brown paper wraps. PAGE SIZE: 235 x 285 mm.

CONTENTS: [2 pgs], Title page, verso "Nota."; [2 pgs], Errata.; I-IX, Introduction.; [1 pg], "Tableau Minéralogique."; 1-84, Tables of minerals.; 85-100, "Index."; 101-102, "Noms Des Auteurs."

RARE. This book is a classified catalog of the splendid mineral collection of Adam, arranged in a tabular manner with respect to physical properties and chemical compositions. The headings for each table give the name, crystal type, hardness, density, fusibility, solubility, composition and formula. An index facilitates the lookup of specific species. The work ends with a list of references consulted. Originally the text was published in *Annales des Mines* (see: 15, 1869, 405-626). However, to create the book, the text was corrected, additional information added and the format changed so that the individual tables occupy a single page rather than being divided at the center as occurred in the original article. That Adam carefully examined his specimens is clearly demonstrated by his discovery and description in this book of the still recognized mineral species: aerugite, chenevixite, corkite, cuprotungstite, scacchite, and xanthiosite.

REFERENCES: BL: [1824.a.4.]. • BMC: 1, 9. • Dana's 7th (Bibliography): 65. • NUC: 3, 209.



F.D. ADAMS

ADAMS, Frank Dawson. (BORN: Montreal, Quebec, Canada, 17 September 1859; DIED: Montreal, Quebec, Canada, 29 December 1942) *Canadian geologist.*

Adams was educated at McGill University, receiving his M.A. in 1884 and a Ph.D. in 1902, and at the University of Heidelberg receiving a Ph.D. in 1892. After serving some time on the staff of the Canadian Geological Survey, Adams was appointed lecturer in geology at McGill University, and in 1893 professor of geology. In 1908 he took on the position of dean of the faculty of applied science at the University and for a time the role of vice principal and as acting principal were also his. Adams was elected a Fellow of the Royal Society of Canada in 1896 and of the Royal Society of London in 1907. He was president of the International Geological Society in 1913, and of the Geological Society of America in 1918. Adams was the author of many papers dealing with the igneous rocks of North America and the effects of temperature and pressure on those rocks. Towards the end of his life, he also wrote *A History of Christ Church Cathedral, Montreal* (Montreal, 1941).

REFERENCES: *Dictionary of Canadian Biography*: 3. • DSB: 1, 50-3 [by T.H. Clark]. • Eakins, P.R., "Frank

AENETIUS

Dawson Adams (1859-1942) - founder of modern structural geology," *Proceedings of the Geological Association of Canada*, 24 (1972), no. 2, 13-6, portrait, figs. 1-3. • *ISIS*, 1913-65: 1, 10. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 133. • *Mineralogical Magazine*: 28 (1947), no. 199, 175-220, portrait. • *Nature*: 151 (1943), 102-3. • *Obituary Notices of the Royal Society*: 4 (1943), no. 12, 381-93, portrait. • Poggendorff: 4, 8, 6, 19 & 7a, 23. • *Proceedings of the Geological Society*, London: 1943, lxxix-lxxxii. • *Proceedings of the Royal Society of Canada*: 1943, ??? . • Sarjeant, *Geologists*, 1980: 2, 390 & Suppl. 1 (1985), 1, 238. • *Science*: 97 (1943), 235-6. • *World Who's Who in Science*: 11.

36. — English, 1938 [Original edition].

The Birth | And Development | of the | Geological Sciences | By | Frank Dawson Adams | Ph.D., D.Sc., F.R.S. | Foreign Associate of the National Academy of Sciences | Vice-Principal (Emeritus), McGill University, Montreal | [ornament] | Baltimore | The Williams & Wilkins Company | 1938.

8°: [i]-v, [1], [1]-506 p., frontispiece (portrait of Hutton), 13 plates (mostly portraits), 79 text figures. PAGE SIZE: 254 x 168 mm.

CONTENTS: [i-ii], Title page, verso copyright information.; [iii], Two quotations.; [iv], Blank.; v, "Contents."; [1 pg], Blank.; [1]-493, Text.; [494], Blank.; [495]-506, "Index."

SCARCE. This famous text traces the history of the geological sciences from Greek and Roman times, through the Middle Ages, the Renaissance and up to the mid-19th century of the modern era. It is not a dry recitation of obsolete ideas but a truly fascinating account of how dozens of curious, colorful systems evolved into modern geology, and its subfields.

In his treatment of the subject, Adams discusses the work of over 300 different authorities, analyzing in detail the ideas of such researchers as William Smith, Agricola, Geikie, Hutton, Werner, Aristotle, Becher, Cuvier, Kircher, and many others. He recounts the birth of modern mineralogy, paleontology and historical geology; treats the origin of metals and their ores, mountains and earthquakes, springs and rivers; describes Becher's metallic tree at the center of the earth, Greek concepts of vulcanology, Sherley's view that metals grow from seeds, da Vinci's theory of fossils, and many other quaint stories and beliefs that delight any reader interested in geology or mineralogy.

Facsimile reprint, 1954 The Birth | And Development | of the | Geological Sciences | By | Frank Dawson Adams | Ph.D., D.Sc., F.R.S. | Foreign Associate of the National Academy of Sciences | Vice-Principal (Emeritus), McGill University, Montreal | | New York, Dover Reprint, 1954. 8°: [4], [1]-506 p., frontispiece, 13 plates, 79 text figures. Modern photographic reprint in a reduced page size.

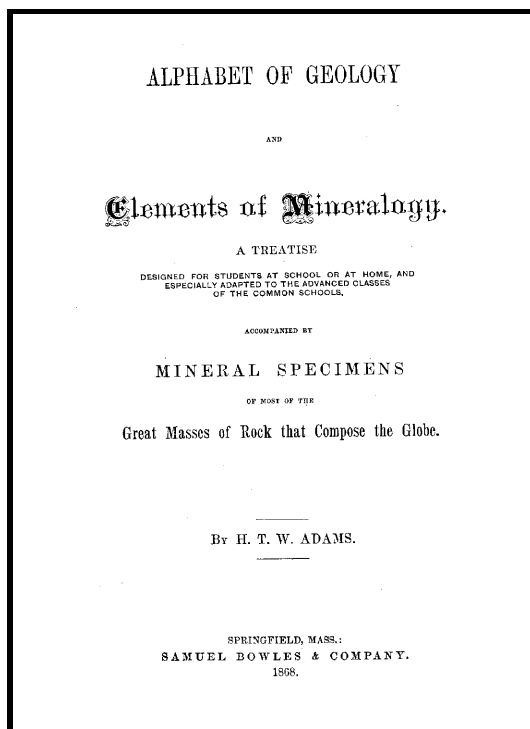
REFERENCES: BL: [07108.dd.32.]. • Sinkankas, *Gemology Bibliography*, 1993: no. 21.

ADAMS, H.T.W. *American mine operator.*

REFERENCES: ABA: II 699, 279-280. • WBI.

37. — English, 1868.

Alphabet Of Geology | And | Elements of Mineralogy. | A Treatise | Designed For Students



ALPHABET OF GEOLOGY, 1868

At School Or At Home, And | Especially Adapted To The Advanced Classes | Of The Common Schools. | Accompanied By | Mineral Specimens | Of Most Of The | Great Masses of Rock that Compose the Globe. | [rule] | By H.T.W. Adams. | [rule] | Springfield, Mass.: | Samuel Bowles & Company. | 1868.

8°: [i]-viii, [9]-70, [2] p. PAGE SIZE: 186 x 114 mm.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1868, by | H.T.W. Adams, | ..."; [iii], "Preface."; [iv]-vi, "Introduction."; [vii]-viii, "Guide To Teachers."; [9]-42, Text.; [43]-46, Poems about the earth.; [47]-70, "Glossary | Of Minerals, Gems, And Definitions Of Terms In Geology | And Mineralogy."; [2 pgs], "Testimonials."

RARE. This small manual was developed to present an introduction to geology and mineralogy for students. It develops its subject through a series of questions and answers. Topics covered include geology, chemistry and paleontology. A long glossary at the end defines various mineralogical terms. According to the title, this textbook was accompanied by a suite of mineral and rock specimens to which reference is made throughout the guide.

REFERENCES: BL: [no copy listed]. • NUC: 3, 430.

AENETIUS, Theophilus. (BORN: Königsfeld near Meissen, Germany, 1574; DIED: Jena, Germany, 15 September 1631) *German physicist & educator.*

Aenetus was professor of physics at the University of

Jena.

REFERENCES: Poggendorff: 1, col. 14.

38. — Latin, 1619 [Dissertation].

Disputatio Physica, | De | Mineralibus | Seu |
 Corporibus Sub- | terraneis. | Quam | $\rho\omega\kappa\theta\epsilon\omega$ |
 Sub Præsidio | Viri Clarissimi & Excellentissimi |
 Dn. M. Theophili Aenetii, | Philos. Nat. in Illustri
 Salana Prof. P. & celeberr. | Dn. Præceptoris
 ac Promotoris sui æter- | num honorandi, |
 ad examinandam proponit, | Johannes Agricola
 Geanus. | Ad diem Julij. | Job. 28.5.6. | Eff
 terne aliquæ ex quæ egrediturpanis, & sub ea est,
 vertitur in quendami | veluti ignem. Locus Sappbiri
 Lapides ejus, & pulveres | auri sunt ei. | Athenis
 Salanis | E Molybdographeâ Weidnerianâ, | Anno
 $\chi\zeta\iota\sigma\sigma\epsilon\eta\alpha\zeta$ | PoLI, saLI, terræq Ve DoMIno sIt
 honor æVIternVs.

4°: A-B⁴; 8ℓ.; [16] p.

CONTENTS: [2 pgs], TP, verso blank.; [14 pgs], Text.

EXTREMELY RARE. Dissertation at the University
 of Jena, 1619. A second part appeared in 1622 with the
 title, "De Metallis."

REFERENCES: BL: [no copy listed]. • CBN: [no copy
 listed]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 24. •
 LKG: III 44. • NUC: [no copy listed]. • VD17: 32:625162H.

39. — Latin, 1622 [Disseration].

Εξεταζιζ Physica | De | Metallis. | Quam |
 [GREEK WORDS] | Exconsensu & autoritate
 Amplissimæ | facultatis Philosophicæ in incluta.
 | Salana, | Præsides, | Viro Clarissimo &
 Excellentissimo | Dn. M. Theophilo Aenetio |
 Physic. Prof. Publ. Præceptore & Pro- | motore suo
 omni observantiæcultu | prosequendo. | Publicæ
 subjscit ventilationi | Casparus Sagittarius |
 Osterburgo-Marchicus. | Ad diem 24. Julij, boris
 locoq solitis. | [ornament] | Jenæ | Typis Johannis
 Weidneri. | [rule] | Anno M. DC. XXII.

4°: A-B⁴ C²; 10ℓ.; [20] p.

CONTENTS: [1 pg], Title page. [1 pg], Dedication.;
 [18 pgs], Text.

RARE. Disseration with Caspar Sagittarius the
 respondent. It was defened on the 24 July 1622 at the
 University of Jena.

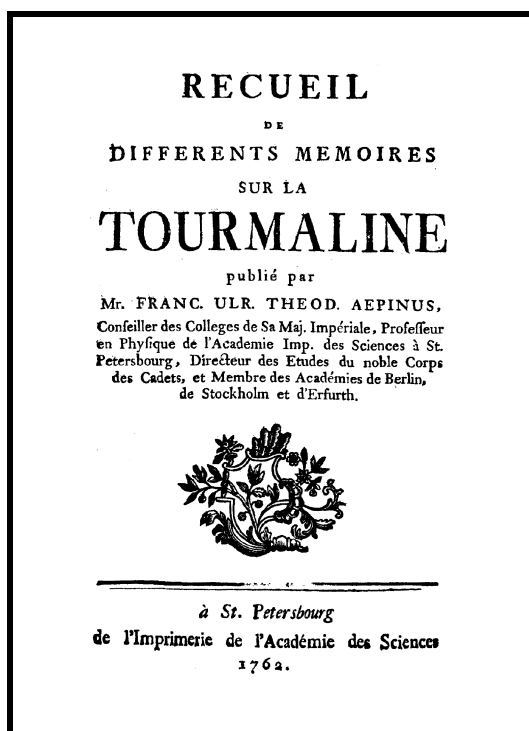
REFERENCES: VD17: 39:139914U.

AEPINUS (Hoch), Franz Ulrich Theodosius. (BORN:
 Rostock, Germany, 13 December 1724; DIED: Dorpat,
 Russia [now Tartu, Estonia], 10 August 1802) *German*
mathematician & physicist.

Aepinus studied medicine and mathematics at Jena
 and Rostock, where he took his M.A. in 1747, with his
 dissertation on the paths of falling bodies. In 1757, he
 settled in St. Petersburg, where he had become a member
 of the Academy of Sciences in 1755, as well as a professor
 of physics. He possessed great skill as an experimenter,
 which he applied to discovering and testing the electrical
 propertities of tourmaline. He was particularly struck by
 the similarity between the magnet and the tourmaline
 with regard to polarity. He authored, *Tentamen Theoriæ*

Electritaitis et Magnetismi (1759), "one of the most original
 and important books in the history of electricity. It is the
 first reasoned, fruitful exposition of electrical phenomena
 based on action-at-a-distance" (DSB).

REFERENCES: ADB. • DBA: I 7, 338-350; II 11, 282-
 285. • DSB: 1, 66-8 [by J.L. Heilbron]. • Hamberger
 & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch,
Biographisches Lexikon, 1884-8. • NDB. • Poggendorff: 1,
 cols. 14-15. • Thomas, *Dictionary of Biography*, 1884: 59. •
 WBI. • Webster's Biographical Dictionary: 14. • World Who's
 Who in Science: 15.



RECUEIL DE DIFFERENTS MEMOIRES, 1762

40. — French, 1762 [First edition].

Recueil | De | Différents Mémoires | Sur La |
 Tourmaline | publié par | Mr. Franc. Ulr. Theod.
 Aepinus, | [...5 lines of titles and memberships...] |
 [ornament] | [double rule] | à St. Petersbourg | de
 l'Imprimerie de l'Académie des Sciences | 1762.

8°:)(8 A-M8)(0(1; 99ℓ.; [16], [1]-179, [3] p., illus.

PAGE SIZE: 222 x 142 mm. uncut.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs],
 Dedication to Catherine Alexievna, signed F.V.T. Aepinus,
 13 July 1762.; [8 pgs], "Avant-Propos."; [1]-179, Text.;
 [1 pg], Blank.; [2 pgs], "Table | des Pièces contenues |
 dans ce Recueil."

RARE. A reprint of the author's original
 paper on tourmaline, "Mémoires concernant quelques
 nouvelles expériences électriques remarquables" (see:
Histoire de l'Académie Royale des Sciences et Belles
Lettres, Berlin, 12, 1756), providing additional detail
 concerning his experimental procedures. In addition,
 Benjamin Wilson's "Experiments on the Tourmalin"

AGASSIZ

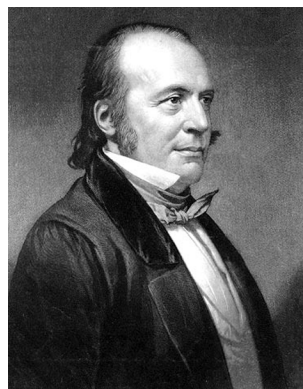
(*Philosophical Transactions of the Royal Society of London*, **51**, 1759) and Duke de Noya Carafa's "Lettre du Duc de Noya Carafa à M. de Buffon" (1759) both dealing with the properties of tourmaline are reprinted with commentary by Aepinus.

Having been inspired by the electrical theories of Benjamin Franklin, Aepinus began experimenting with electricity. Eventually, he turned his attention to the tourmaline stone which was thought to produce a positive and negative electrical charge when heated. Upon experimenting with a large stone, Aepinus proved to his satisfaction the mineral did create electricity when sufficiently heated. He became entranced with this phenomenon which he compared to the dipolar behavior of magnets.

REFERENCES: BL: [990.g.7.]. • CBN: 1, 300. • Home, Roderick Weir., "Aepinus, the tourmaline crystal, and the theory of electricity and magnetism," *Isis*, **67** (1976), 21-30. • Lang, *Sourcebook of Pyroelectricity*, 1974: 105-10. • LKG: XVI 405. • Mottelay, *History of Electricity & Magnetism*, 1922: 218-19. • NUC: 4, 498-9. • Sinkankas, *Gemology Bibliography*, 1993: no. 25D [not seen].

Sciences et Belles Lettres, Berlin, **12**, 1756). In addition, this publication also contains the text of two letters, one on pyroelectricity the other on tourmaline. Another German translation appeared in *Mineralogische Belustigungen* (Leipzig, 1768-71, 1, 302-22).

REFERENCES: BL: [no copy listed]. • Gatterer, *Mineralogischen Literatur*, 1798-9: **2**, 62. • LKG: XVI 406a.



AGASSIZ

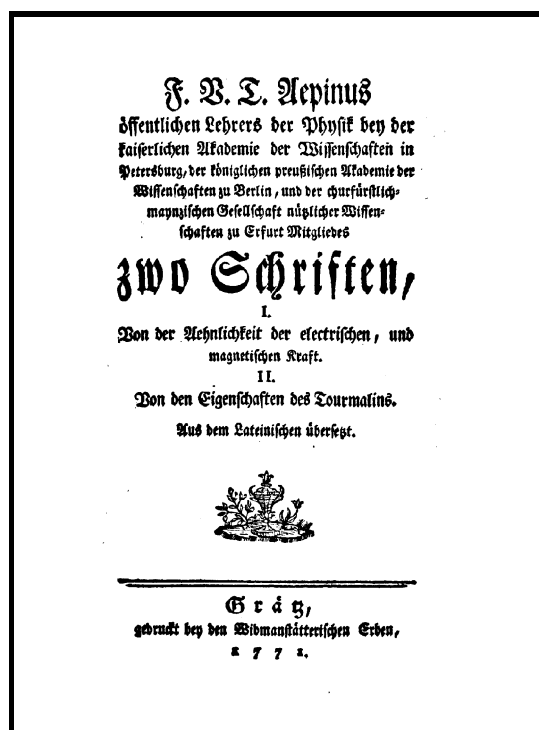
AGASSIZ, Jean Louis Rodolphe. (BORN: Motier-en-Vully, Fribourg, Switzerland, 28 May 1807; DIED: Cambridge, Massachusetts, U.S.A., 14 December 1873) *Swiss/American physician, zoologist & geologist.*

Agassiz was educated in France, Switzerland and Germany, receiving an M.D. from the University of Heidelberg in 1826 and a Ph.D. from the University of Erlangen in 1829. He conducted zoological research under GEORGES CUVIER and became professor of natural history at the University Neuchatel, Switzerland (1832-46). In 1846, he came to America teaching at Yale and Harvard. Agassiz became an American citizen in 1862, and settled in Cambridge as a professor of zoology at Harvard. He was a founding member of the National Academy of Sciences. As a professor he trained many outstanding zoologists and geologists of the next generation.

REFERENCES: ABA: I 9, 387-464; 1811, 354-364; II 5, 50-62; S 1, 385-415. • *American Malacologists*: p. 58. • *Appleton Cyclopaedia of American Biography*. • *Catalogue of Portraits of Naturalists*: 101 [9 portraits listed]. • DAB: 1, 114-22 [by D.S. Jordan and J.K. Jordan]. • Drake, *Dictionary of American Biography*, 1872. • DSB: 1, 72-4 [by E. Lurie]. • Elliott, *Biographical Index*, 1990: p. 5. • Elliott, *Biographical Dictionary*, 1979: p. 13. • Ireland, *Index to Scientists*, 1962. • Kelley & Burrage, *American Medical Biography*, 1928. • *National Academy of Science Biographical Memoirs*: 2, ?? . • *National Cyclopaedia of American Biography*. • Poggendorff: 1, col. 16. • WBI. • *World Who's Who in Science*: p. 13. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: p. 8.

42. — English, 1848-54 [First edition].

Bibliographia | Zoologiae et Geologiae. | [double rule] | A General Catalogue | of all | Books, Tracts, and Memoirs | on | Zoology and Geology. | By Prof. Louis Agassiz, | Corr. Memb. Brit. Assoc. Adv. Sc. &c. | Corrected, enlarged, and edited | By H.E. Strickland, M.A., F.G.S. &c. | Vol. I. | containing Periodicals, | and the Alphabetical List from A to BYW. | London: | Printed for the Ray



ZWO SCHRIFTEN, 1771

41. German transl., 1771: F.V.T. Aepinus | [...6 lines of titles and memberships...] | Zwo Schriften, | I. | Von der Aehnlichkeit der electrischen, und | magnetischen Kraft. | II. | Von den Eigenschaften des Tourmalins. | Aus dem Lateinischen übersetzt. | [ornament] | [double rule] | Grätz, gedruckt bey den Widmanstättenischen Erben, 1771.

8°: [4], [1]-44, [2], [1]-28 p., one folded leaf of plates. RARE. Translation from the original "Mémoires concernant quelques nouvelles expériences électriques remarquables" (see: *Histoire de l'Académie Royale des*

Society. | 1848.

[VOLUME 2 READS:]

Bibliographia | ... | Vol. II. | Containing the Alphabetical List from CAB to FYE. | ... | 1850.

[VOLUME 3 READS:]

Bibliographia | ... | Vol. III. | Containing the Alphabetical List from GAB to MYL. | ... | 1852.

[VOLUME 4 READS:]

Bibliographia | ... | and | Sir William Jardine, Bart., F.R.S.E., &c. | Vol. IV. | Containing the Alphabetical List from NAC to ZWI. | ... | 1854.

[SERIES TITLE PAGE:]

The | Ray Society. | Instituted MDCCCXLIV. | [ornament] | London. | MDCCCXLVIII [-MDCCC-LIV].

4 vols. [VOL 1: 1848] 8°: a⁸ b⁴ B-2I⁸ 2K⁴ 2L²; 266ℓ.; [2], i-xxiii, [1], 1-506 p. [VOL 2: 1850] 8°: π³ B-2H⁸ 2I⁷; 249ℓ.; [6], 1-492 p. [VOL 3: 1852] 8°: π³ B-2S⁸ 2T⁹; 332ℓ.; [6], 1-657, [1] p. [VOL 4: 1854] 8°: π³ B-2P⁸ 2Q⁶; 305ℓ.; [6], 1-604 p. PAGE SIZE: 220 x 144 mm.

CONTENTS: [Vol 1] [2 pgs], Series title page, "The | Ray Society. | Instituted MDCCCXLIV. | [portrait of John Ray] | London. | MDCCCXLVIII," verso blank.; [i-ii], Title page, verso "Printed By | Richard And John Edward Taylor, | "; [iii], "Contents."; [iv], Blank.; [v]-xii, "Preface By The Editor"—signed H.E. Strickland, April 1848.; [xiii]-xxiii, "List Of Abbreviations Used In Part II."; [1 pg], Blank.; [1]-506, Text (A-Byw).

[Vol 2] [2 pgs], Series title page, "The | Ray Society. | Instituted MDCCCXLIV. | [portrait of John Ray] | London. | MDCCCL," verso blank.; [i-ii], Title page, verso "Printed By | Richard And John Edward Taylor, | "; [1 pg], "Errata In Vol. I."; [1 pg], Blank.; [1]-492, Text (C-Fyf).

[Vol 3] [2 pgs], Series title page, "The | Ray Society. | Instituted MDCCCXLIV. | [portrait of John Ray] | London. | MDCCCLIII," verso blank.; [i-ii], Title page, verso "Printed By | Richard And John Edward Taylor, | "; [1 pg], "Notice."—signed H.E. Strickland, 23 July 1852.; [1 pg], Blank.; [1]-657, Text (G-Myl); [1 pg], "Printed By Taylor And Francis | "

[Vol 4] [2 pgs], Series title page, "The | Ray Society. | Instituted MDCCCXLIV. | [portrait of John Ray] | London. | MDCCCLIV," verso blank.; [i-ii], Title page, verso "Printed By | Richard And John Edward Taylor, | "; [1 pg], "Advertisement."—dated 1 December 1854.; [1 pg], Blank.; [1]-604, Text (N-Zwi).

SCARCE. This important early bibliography lists all the titles known to the author and editors pertaining to zoology and geology from the earliest times to almost the time of publication. The text is in two parts. The first part (vol. 1, pp. 1-86) lists periodicals and other sources consulted, while the second is the bibliography proper, arranged alphabetically by author. The entries are abbreviated, with little detail, as is expected in a work of this scope. However, it is a valuable source for information on early works.

REFERENCES: BL: [Ac.3023/3.]. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: 1, 11-2, no. 24. • NUC. • Wood, *Literature of Vertebrate Zoology*, 1931: 182.

AGRICOLA, Georgius. (BORN: Glauchau, Saxony, Germany, 24 March 1494; DIED: Chemnitz, Saxony,



AGRICOLA

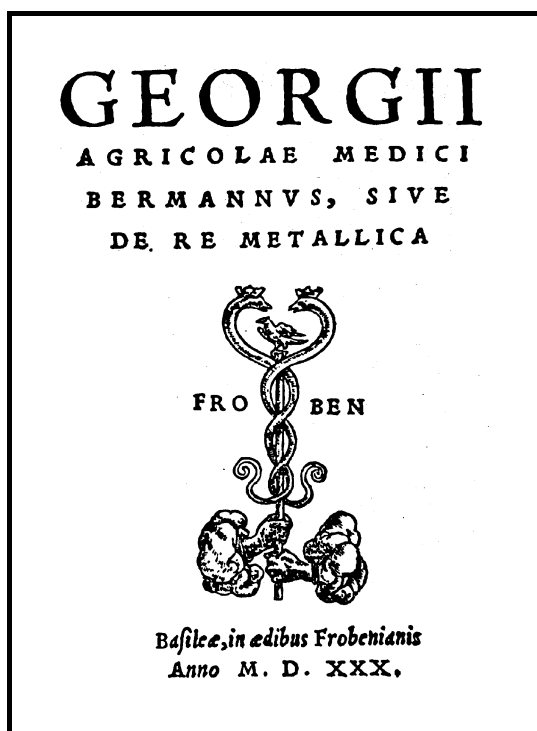
Germany, 21 November 1555) *German physician, mineralogist & mining expert.*

From 1518 to 1522, Agricola studied medicine and chemistry at Bologna, Venice and Padua. He then taught the classics at the Municipal School, Zwickau, Saxony. In 1527, he moved to Joachimsthal, Czechoslovakia, where he opened a medical practice. In this locality, with the mining activities of the surrounding area impacting his daily life, Agricola began to study mining techniques and mineralogy. After an appointment in 1533 as official historian for the principality of Saxony, which included an annual stipend, Agricola moved again. He relocated his medical practice to Chemnitz in Saxony. There he became a civic leader which lead to his being elected mayor of the town in 1546, 1547, 1551, and 1553. Agricola was one of the extraordinary scientists of his age. His texts on medical diseases suffered by miners were innovative for the time, and for his works that dealt with mining and mineralogy, he was labeled "The father of mineralogy" by no less than ABRAHAM GOTTLÖB WERNER.

REFERENCES: ADB: 1, 143 & 28, 807. • Barr, *Index to Biographical Fragments*, 1973: 3. • Becher, F.L., *Die Mineralogen, Georg Agricola zu Chemnitz, im sechzehnten, und A.G. Werner zu Freiberg, im neunzehnten Jahrhunderte, Winke zu einer biographischen Zusammenstellung aus Sachsens Culturgeschichte*. Freiberg, Craz und Gerlach, 1819. 67 p. • *Biographical Dictionary of the History of Technology*: 8-9. • Bugge, *Buch der grossen Chemiker*, 1929: 1, 104 ff., portrait. • *Catalogue of Portraits of Naturalists*: 102 [1 portrait listed]. • Darmstädter, Ernst, "Georg Agricola, 1494-1555. Leben und Werk," *Münchener Beiträge zur Geschichte und Literatur der Naturwissenschaften und Medicine*, pt. 1 (1926), 96 p., portrait. • DBA: I 8, 264-272; II 12, 324-347. • Deutsche Akademie der Wissenschaften, *Georgius Agricola, 1494-1555. Zu seinem 400. Todestag 21. November 1955*. Berlin, Akademie-Verlag, 1955. 376 p., frontispiece, 23 plates, illus. • DSB: 1, 77-9 [by H.M. Wilsdorf]. • *Encyclopaedia Britannica*, 11th edition. • Eyles, J.M., "Georgius Agricola (1494-1555)," *Nature, London*, 176 (1955), 949-50. • Fischer, W., "Dr. Georg Agricola," *Zeitschrift der Deutschen Geologischen Gesellschaft*, 96 (1944), pts. 1-3, 124-8, one fig. • Fischer, *Mineralogie in Sachsen*, 1939: 1-29 & ff. • Fischer, Walther., "Zum 450. Geburtstag Agricolas, des 'Vaters der Mineralogie,'" *Neues Jahrbuch Mineralogie, Geologie und Palaeontologie*, Series A, 1944, nos. 7-9, p. 113-225, 42 figs., one table. • Hartmann, H., *Georg Agricola, 1494-1555: Begründer dreier Wissenschaften, Mineralogie-Geologie-Bergbaukunde*. Stuttgart, Wissenschaftliche Verlagsgesellschaft M.B.H., 1953. [Published as: *Grosse Naturforscher*, no. 13.]. • Hofmann, R., "Dr. Georgius Agricola aus Glauchau 'Der Vater der Mineralogie,'" *Schönburgische Geschichtsblätter*, 4 (1898), 39-122. • Hofmann, R., *Dr. Georgius Agricola. Ein Gelehrtenleben aus dem Zeitalter der Reformation* Gotha,

AGRICOLA

Germany, Perthes, 1905. [5], 189 p., portrait. • *ISIS*, 1913-65: 1, 16-7. • Jacobi, G.H., *Der Mineraloge Georgius Agricola, und sein Verhältniss zur Wissenschaft seiner Zeit. Ein Beitrag zur Geschichte der Reformationszeit*. Werdau, Germany, 1879. 72 p. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Krafft, *Grosse Naturwissenschaftler*, 1986: 8-9 [by F. Krafft]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 4. • NDB: 1, 98-100 [by W. Pieper]. • NY Academy Portrait Catalog: 1 [6 portraits listed]. • Poggendorff: 1, col. 17. • Sarjeant, *Geologists*, 1980: 2, 402-5, Suppl. 1 (1986), 1, 241-2 & Suppl. 2 (1995), 1, 374-5. • Schaedler, *Biographisch Handwörterbuch*, 1891: 2. • Schrauf, A., "Zur Erinnerung an Georg Agricola, geboren zu Glauchau 1494, den 24 März," *Zeitschrift der praktische Geologie*, 2 (1894), 217-24, portrait. • Wagner, *Mineralogisch Durchforschung Sachsens*, 1902. • WBI. • Wellcome Catalog (History): 14, 26-7 [other refs.]. • Wilsdorf, H., "Neue Agricola-Forschungen des Staatlichen Museum für Mineralogie und Geologie zu Dresden," *Urania*, 16 (1953), 441-6. • Wilsdorf, H., "Probleme einer neuen Agricola-Ausgabe," *Bergakademie, Freiberg*, 6 (1954), 14-6. • World Who's Who in Science: 18. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 8.



BERMANNUS, 1530

Bermannus

43. — Latin, 1530 [First edition].

Georgii | Agricolae Medici | Bermannus, Sive | De Re Metallica | [ornament] | Basileæ, in ædibus Frobenianis | Anno M. D. XXX.

8°: a-h⁸ i⁴; 68ℓ.; [1]-135, [1] p. Woodcut device on title page and 3 historiated woodcut initials. Colophon, p. 135: Basilea, In Officina | Frobeniana, Anno | M. D. XXX. Froben's printers device, on verso of last leaf.

CONTENTS: [1-2], Title page, verso blank.; 3-4, "Des. Erasms Rot. | Ornatissimis Fratri | bus Andree et Christophoro | à Conritz S.D. | (Erasmi Epistola)."; 5-9, "Nobili Et Clarissimo | Viro Henrico À Con | ritz Præfecto uallis Ioachimicæ, | Petrus Plateanus S. (Epistola Nvncvpatoria)."; 10-151, "Georgii | Agricolae Berman | nus, siue de re metallica."; 131-135, "Rervm Metallicarvm | appellationes iuxta uernaculam Ger | manorum linguam, autore | Plateano."; [1 pg], Froben's printers device.

VERY RARE. *Bermannus, sive De Re Metallica Dialogus* is Agricola's first published work in relation to mining. The text of this work is in the form of a dialogue between "Bermannus," who is described as a miner, mineralogist, poet, and student of mathematics, and "Nicolaus Ancon" and "Johannes Neavius," both scholars and physicians. The main theme of the dialogue is the correlation of minerals mentioned by the ancient authors and those found in the Saxon mines. The three conversationalists wonder through the mines and discuss matters that come to their attention. There is no systematic or logical arrangement to the text, therefore. Occasionally, statements of historical or technical interest are included. The mineralogical part, while of importance for giving the first description of several minerals such as bismuth, is much improved in *De Natura Fossilium* (1st ed., Basileæ, 1546).

German, 1955: Georgius Agricola — Ausgewählte Werke | Gedenkausgabe Des Staatlichen Museums Für Mineralogie Und | Geologie Zu Dresden — Herausgegeben Dr. Ber. Nat. Hans Prescher | [rule] | Georg Agricola | Bermannus oder über den Bergbau | Ein Dialog | Übersetzt und bearbeitet von Dr. phil. Helmut Wilsdorf | in Verbindung mit Dr. rer. nat. Hans Prescher und | Dr. med. Heinz Techel | 1955 | VEB Deutscher Verlag Der Wissenschaften | Berlin. 8°: [i]-viii, [1]-379, [1] p.

CONTENTS: [i-ii], Half title page, "Georgius Agricola — Ausgewählte Werke — Band II," verso blank.; [iii-iv], Title page, verso "Alle Rechte, ..."; [v], "Vorwort" — signed Helmut Wilsdorf, 24 March 1955.; [vi], Blank.; [vii]-viii, "Inhalt."; [1]-55, Essays placing the Bermannus into historical perspective.; 56-172, Translation.; 173-379, Notes, biographies, maps, glossary, all designed to help clarify the translation.; [1 pg], "Zusammenfassung."

Modern translation with commentary by Helmut Wilsdorf of the *Bermannus* (Basileæ, 1530), together with considerable additional material describing the work's historical importance. Other essays provide biographical details of people mentioned by Agricola, an equivalence dictionary of mineral names, a register of geographical locations, etc.

French transl., 1990: *Bermannus (le mineur). un dialogue sur les mines. Georg Agricola. introduction, texte établi, traduit et commenté par Robert Halleux et Albert Yans ...* Paris, Les Belles Lettres, 1990. 185 p. [BL, YA.1991.b.4244.]

REFERENCES: Adams, *Cambridge Books*, 1967: A-348. • Agricola Bibliographie: 590-6. • BL: [987.a.14.]. • Dana's 7th (Bibliography): 65. • *Freilich Sale Catalog*: no. 9. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Ward & Carozzi, *Geology Emerging*, 1984: no. 27.

44. 2nd edition, 1541: Georgii Agri- | colae Medici | Bermannus, | Sive De Re Me- | tallica. | [ornament] | Parisiis. | Apud Hieronymum Gormontiu | In Vico Iacobeo sub signotrium | Coronatum. | 1541.

8°: [1]-108 p.
CONTENTS: [1-2], Title page, verso blank.; 3-4, "Des. Erasms Rot. | Ornatissimis Fratri | bus Andree et Christophoro | à Conritz S.D. | (Erasmi Epistola)."; 5-9, "Nobili Et Clarissimo | Viro Henrico À Con | ritz Præfecto uallis Ioachimicæ, | Petrus Plateanus S. (Epistola

Nvncvatoria)."; 10-105, "Georgii | Agricolae Berman | nus, siue de re metallica."; 106-108, "Rervm Metallicarvm | appellationes iuxta uernaculam Ger | manorum linguam, autore | Plateano."

RARE. Paris reprint of the Basel 1530 first edition, with the text completely reset, and no additional material added.

REFERENCES: Agricola Bibliographie: 596-7. • BL: [446.a.42.].

45. 3rd edition, 1546: Georgii | Agricolae Medici | Bermannvs, Sive | De Re Metal | lica. | Ab Accvrata Avtoris | recognitione & emendatione | nunc primum editus. | Cvm Nomenclatvra | Rervm Metall | Carvm. | Lipsiae | In Officina Valen- | tini Papæ. | Anno | [rule] | M. D. XLVI. 8°: A-F8; 48ℓ.; [2], [1]-93, [1] p.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-2, "Des. Erasmvs ..."; 2-5, "Nobili Et Cla | rissimo ..."; 6-86, "Georgii | Agricolae Berman | us ..."; 87-93, "Rervm Metal= | licarvm ...";

RARE. The text is an improvement over the original, probably by the pen of Agricola. It appears to be somewhat less expanded than the rendition that appeared in the same year in the collected works of Agricola, *De Ortu & Causis Subterraneorum* (Basileæ, 1546).

REFERENCES: Agricola Bibliographie: 597-9. • BL: [no copy listed]. • Shaaber, *Sixteenth Century Imprints*, 1976: A-72. • Wellcome Catalog (Books): 1, no. 61.

German editions

46. First edition, 1778: Georg Agricola | von Glauchen | ehemahls Stadt Arztes zu St. Joachimsthal | Gespräch | vom | Bergwesen | wegen seiner Fürtrefflichkeit aus dem lateinischen | in das teutsche übersetzt | mit nützlichen Anmerkungen erläutert | und | mit einem ganz neuen Zufaße | von | klüglicher Anstellung des Bergbaues | und von der | Zugutemachung der Erze auf den Hüttenwerken | versehen | von | Johann Gottlieb Stör. | [ornate rule] | Rotenburg und der Fuida | beim Hofbuchhändler Hermstadt | 1778.

8°: [16], [1]-180, [12] p.

CONTENTS: [2 pgs], Title page, verso blank.; [8 pgs], "Vorrede | des Uebersetzers, | con den Tadeln und Vorzügen des | Bergwesens."; [1 pg], "Des | berühmten Desiderius Erasmus | von Rotterdam | Urtheil | ..."; [5 pgs], "Peter Platrans Znschrift."; 1-116, "Georg Agricola | von Glauchen | Gespräch | vom | Bergwesen."; 117-152, "Erster Anhang | von | klüglicher Anstellung des | Bergbaues | durch | Johann Gottlieb Stör."; 153-180, "Zweiter Anhang | von | der Zugutemachung der Erze | auf den Hütten=Wercken | durch | Johann Gottlieb Stör."; [8 pgs], "Inhalt."; [4 pgs], "Verbesserungen."

RARE. Translation by Johann Gottlieb Stör [see note below] of *Bermannus* (Basileæ, 1530). This is the first translation into a modern language of Agricola's first writing. There is no information as to why the translation was undertaken, or why it was published 15 years after the translator's death.

Johann Gottlieb Stör. (BORN: Engelsdorf near Leipzig, Germany, 24 November 1705; DIED: Leipzig, Germany, 5 September 1763) *German mining law expert*. Stör attended the schools of Grimma and studied theology and metallurgy at the University of Leipzig, graduating in 1729. In 1741, he was awarded an advanced degree in law from the University of Erfurt. He worked in the mining industry around Leipzig.

REFERENCES: Agricola Bibliographie: 600-3. • BL: [no copy listed]. (Stör) DBA: I 1232, 115-124; II 1271, 384. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 2, col. 1015. • WBI.

47. 2nd edition, 1806: Gerog Agrikola's | Bermannus | eine | Einleitung | in die | metallurgischen Schriften desselben, | übersetzt | und mit Exkursionen | herausgegeben | von | Friedrich August Schmid. | Haushalts= und

Befahrungs=Protokollist im Churs. vereinigten | Bergamte zu St. Annaberg. | [tapered rule] | Freyberg, 1806. | bey Craz und Gerlach.

8°: [i]-viii, [1]-262 p.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; v-viii, "Vorrede."; 1-38, Review of Agricola's life and writings.; 39-223, "Agricola's Bermannus Gespräch vom Bergwerke."; 224-226, "Erster Exkursus. Ueber das Alter des teutschen Bergbaues."; 227-228, "Zweite Exkursus. Ueber die Ausbeute der Alten."; 229-232, "Dritter Exkursus. Ueber das Alter des Iglauer und Freiburger Bergrechts."; 233-237, "Vierter Exkursus. Ein Beitrag zur Geschichte der Wünschelruthe."; 238-242, "Fünfter Exkursus. Ueber die Benennung der Grubengebäude."; 243-247, "Sechster Exkursus. Über die galena, plumbago, molybdaena und den lapis molybdoides der Alten."; 248-250, "Siebenter Exkursus. Über den Pyrites der Alten."; 251-252, "Achter Exkursus. Ueber das gediegene Silber der Alten."; 253-254, "Neunter Exkursus. Über das Stannum und plumb. candidum der Alten."; 255-256, "Zehnter Exkursus. Über die Chrysokolla der Alten."; 256, Elfter Exkursus. Ueber die Sandaraka der Alten."; 257, "Zwölfter Exkursus. Über den Gyps der Alten."; 258-259, "Dreizehnter Exkursus. Ueber das Misy, Sory und den Chalcitis der Alten."; 260, "Vierzehnter Exkursus. Ueber den Kobalt der Alten."; 261-262, "Druckfehlerberichtigung."

RARE. Translation by Friedrich August Schmid of *Bermannus* (Basileæ, 1530). It contains a most valuable biographical and bibliographical preface by the translator, as well as interesting discussions of the metals and minerals known during the time of Agricola.

REFERENCES: Agricola Bibliographie: 604. • BL: [7104.b.3.]. • Leonard's *Taschenbuch*: 2, 325-6 [review].

48. — Czech, 1957 [Czech transl.].

Lékař | Georgius Agricola | [rule] | Bermannus | aneb | Rozmluva O Hornictví | [rule] | Z latiny | podle prvního Frobenova vydání | přeložil Jan Reiniš | Nakladatelství | Československé Akademie VÉD | Praha 1957.

8°: 235 p.

VERY SCARCE. Translation by Jan Reiniš [see note below] of *Bermannus* (Basileæ, 1530).

Jan Reiniš. (BORN: ; DIED:) Czech.

[
BIOGRAPHY NEEDED
]

REFERENCES: Agricola Bibliographie: 607-8. (Reiniš)

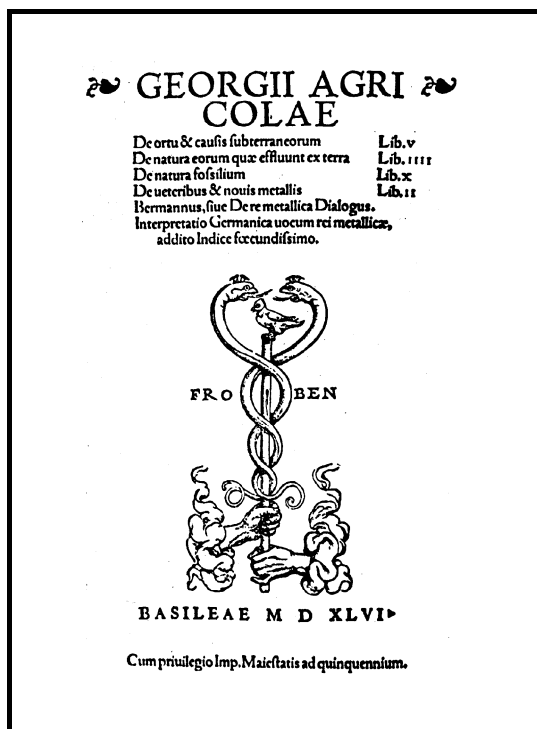
De Natura Fossilium

49. — Latin, 1546 [First edition].

Georgii Agri | colae | De ortu & causis subterraneorum Lib. V | De natura eorum quæ effluunt ex terra Lib. IIII | De natura fossilium Lib. X | De ueteribus & nouis metallis Lib. II | Bermannus, siue De re metallica Dialogus. | Interpretatio Germanica uocum rei metallicaæ, | additio Indice fœcundissimo. | [ornament] | Basileae M D XLVI | Cum priuilegio Imp. Maiestatis ad quinquennium.

2°: a-g⁶ h⁴ i-z⁶ A-P⁶ Q⁸ R⁶ S⁴; T-X⁶ Y⁸ (g⁶ and M⁶ blank); 270ℓ.; [1]-487, [1], [52] p. PAGE SIZE: 305 x 194 mm.

CONTENTS: [1], Title page.; 2, "Adami Siberi Elegia Ad Valentinvm Hertelivm De Libris Georgij Agricolae.";



DE ORTU & CAUSIS SUBTERRANEORUM, 1546

3-4, Recommendatory letter, signed Herzog Moritz, 1 March 1544.; 5-82, "De Ortu Et Causis Subterraneorum."; [83]-[84], Blanks.; 85-164, "Georgii Agricolae De Natvra Eorvm Quae Efflvnt Ex Terra Libri quatuor."; 165-380, "De Natvra Fossilium Libri Decem."; 381-414, "De Veteribvs Et Novis Metallis."; [415]-[416], Blanks.; 417-468, "Bermannvs, Sive De Re Metallica."; 469-470, "Georgivs Agricola Volfgango Mevrero."; 470-472, "Emendatio Librorvm De Ortv & causis subterraneorum."; 473-487, "Seqvntvr Rervm De Qvibvs Scribimvs, ..."; [1 pg], Blank.; [51 pgs], "Index In Vniversum Hoc Opvs quàm copiosissimus."; [1 pg], Froben's printer's device.

VERY SCARCE. This is a collected edition of Agricola's works on mineralogy, geology and mining. It consists of six separate treatises, several of which appear in print for the first time.

[A]. *De Ortu & Causis Subterraneorum* in five books has always been published in the company of other works. This is Its first appearance. The work consists of five books that contain Agricola's philosophical views on geological phenomena. The major portion of this text is a refutation of the geological ideas of the ancient philosophers, the alchemists and the astrologers. It displays Agricola's wide ranging knowledge of the classic authors and his ability in observation and dialectics. But it is when Agricola presents his own ideas that new territory was established in science.

Book I is devoted to a discussion of the origin and distribution of ground water and mineralizing jucies. The last portion of this book and that of Book II consider the origin of subterranean heat that he

attributes to burning coal and sulfur and the friction subterranean winds against the walls of caves. Book III is devoted to the origin of ore channels, while Books IV & V describe in summary the principal divisions of the mineral kingdom as given in *De Natura Fossilium*.

[B]. *De Natura Eorum quae Effluunt ex Terra* in four books also appears here for the first time. As the title indicates this is a discussion of substances that flow from the earth, such as water, bitumen, gases, etc. The major portion refers to color, taste, temperature, medicinal uses of water, and descriptions of rivers, lakes, swamps, and aqueducts. In the shadow of Agricola's other writings, it is a valueless and totally uninteresting treatise.

[C]. *De Natura Fossilium* in ten books is Agricola's most important statement on mineralogy. It has always been printed in combination with other works, and this is its first edition.

De Natura Fossilium is an epoch work often cited as the publication that marked the beginning of mineralogy as a science. In this work, Agricola approached the study of mineral substances in a naturalistic way. He rejected many myths associated with gems, and the system of classification that is inferred from his writings exhibits a degree of generalization not found in earlier handbooks. It is often considered the first attempt at systematic mineralogy, the minerals being grouped into (1) earths, like clay, ochre, etc., (2) stones like gems, semi-precious and unusual as distinguished from rocks, (3) congealed juices like salt, vitriol, alum, etc., (4) metals and (5) compounds being homogenous mixtures of simple substances and forming minerals like pyrite, galena, etc. Agricola applied physical properties such as solubility, fusibility, odor, taste, color, etc to distinguish between mineral varieties. He describes several varieties of earth, and arranged the descriptions according to the purpose for which they were used. Thus he speaks of earths used by farmers as different from those used by potters, sculptors, painters and physicians. This demonstrates that he had an awareness of problems connected with the classifying of similar substances. Agricola was a practical man and his great contribution was to mineral description. He codified much of the ancient knowledge, but in the case of theoretical mineralogy developed no new insights. References in contemporary books show that soon after Agricola mineralogical works were published, they were being cited as authoratative sources.

Book I describes the characteristics of minerals such as color, brilliance, taste, shape, hardness, etc. Book II describes the earths and Book III reviews the minerals made of congealed juices, and includes salt, soda, potash, saltpetre, alum, vitriol, orpiment, etc. Book IV treats camphor, bitumen, coal, amber, etc. Book V covers lodestone, bloodstone, gypsum, talc, asbestos, mica, geodes and various fossils, flourite and quartz. Book VI treats gems and other precious stones. Book VII in on rocks like marble, serpentine, onyx, alabaster, limestone, etc. Book VIII covers metals,

while Book IX describes various furnace observations such as making brass, gilding, tinning and furnace products like slag, copper flowers, etc. Book X covers compounds that embrace the description of a number of recognizable silver, copper, lead, quicksilver, iron, tin, antimony and zinc minerals.

[D]. *De Veteribus & Novis Metallis* in two books is a short work that also appears here in a first edition. It describes mainly historical and geographical references to the occurrences of metals and mines. Agricola had extracted this information from the Greek and Latin classic texts as well as the history of mines in Central Europe. The later material is the only original material, and is unfortunately not very extensive.

[E]. *Bermannus, sive De Re Metallica Dialogus* in one book was Agricola's first published work in relation to mining, which was first published as an independent work at Basel in 1530. In this new edition, Agricola makes many important changes and adds some new material, but later editions often reprint the text of the 1530 edition. The text of this work is in the form of a dialogue between "Bermannus," who is described as a miner, mineralogist and student of mathematics and poetry, and "Nicolaus Ancon" and "Johannes Neavius," both scholars and physicians. The main theme of the dialogue is the correlation of minerals mentioned by the ancient authors and those found in the Saxon mines. The three conversationalists wonder through the mines and discuss matters that come to their attention. There is no systematic or logical arrangement to the text, therefore. Occasionally, statements of historical or technical interest are included. The mineralogical part, while of importance for giving the first description of several minerals such as bismuth, is much improved in *De Natura Fossilium*.

[F]. *Interpretatio Germanica uocum rei Metallicae* is a translation list of German equivalents for the Latin mineralogical terms used by Agricola in his numerous writing. It first appeared in the collected edition of 1546, being included in all subsequent editions. It consists of about 500 mineralogical and metallurgical terms in Latin, many of which were invented by Agricola to clarify his explanations. This work is of great value to the study of mineralogical nomenclature.

English, 1955: The Geological Society of America | Special Paper 63 | [rule] | *De Natura Fossilium* | (Textbook of Mineralogy) | by | Georgius Agricola | Translated from the First Latin Edition of 1546 | by | Mark Chance Bandy | and | Jean A. Bandy | for the | Mineralogical Society of America. | [ornament] | [rule] | November 1955. 8°: [i]-xiii, [1], 1-240 p., frontispiece (portrait of Agricola), index.

CONTENTS: [i-ii], Title page, verso publisher's information.; [iii], "The Special Papers of the Geological Society of America are made possible through the bequest of Richard Alexander Fullerton Penrose, Jr.;" [iv], Quote by Agricola.; v-vii, "Forward.;" [viii], Blank.; ix-x, "Georgius Agricola."—biographical information.; xi, "Translator's Preface.;" [xii], Blank.; xiii, "Contents.;" [1 pg], Blank.; 1-4, Dedication to Prince Maurice of Saxony, Thuringia and Misena.; 5-223, Text, divided into 10 books.; [224], Blank.; 225-232, "Latin Mineral Index.;" 233-234, "Greek Mineral Index.;" 235-240, "General Index."

Published as *The Geological Society of America, Spe-*

cial Paper 63. Translated by Mark Chance Bandy [see note below] and Jean Arney Bandy [?-1991] from *De Natura Fossilium* (Basileae, 1546). In the brief introduction, the translator's describe Agricola's method of classifying minerals. This is then followed by the translation proper. Notes scattered throughout the text are intended to primarily help the identification of minerals whose present names differ from those used by Agricola. Occasionally, extracts from Agricola's *Bermannus* (Basileae, 1530), an introductory work on mining, have been included to add clarity to the translation.

German, 1958: Georgius Agricola — Ausgewählte Werke | [...2 lines of titles...] | Georgius Agricola | *De natura fossilium libri X* | Die Mineralien | Übersetzt und bearbeitet von Dr. phil. Georg Fraustadt | in Verbindung mit Dr. rer. nat. Hans Prescher | [ornament] | Veb Deutscher Verlag Der Wissenschaften | Berlin 1958. 8°: [6], [1]-548 p.

CONTENTS: [2 pgs], Half title page, "Georgius Agricola — Ausgewählte Werke — Band IV," verso blank.; [2 pgs], Title page, verso "Herausgeber: Dr. rer. nat. Hans Prescher | ...;" [1 pg], "Inhalt.;" [1 pg], Blank.; [1], Georgius Agricola | Die Mineralien | 10 Bücher | 1546 | ...;" [2], Blank.; [3]-7, "Mineralogische Einführung.;" [8]-12, "Historisch-philologische Einführung.;" [13]-273, Text of translation.; [274]-291, "Mineralogisch-geologische Anmerkungen.;" [292]-301, "Historisch-philologische Anmerkungen.;" [303]-312, "Lateinisch-griechisch-deutsches Mineralverzeichnis.;" [313]-344, "Mineralregister.;" [345]-395, "Personenregister.;" [396]-476, "Geographisches Register.;" [477]-548, "Sachverzeichnis."

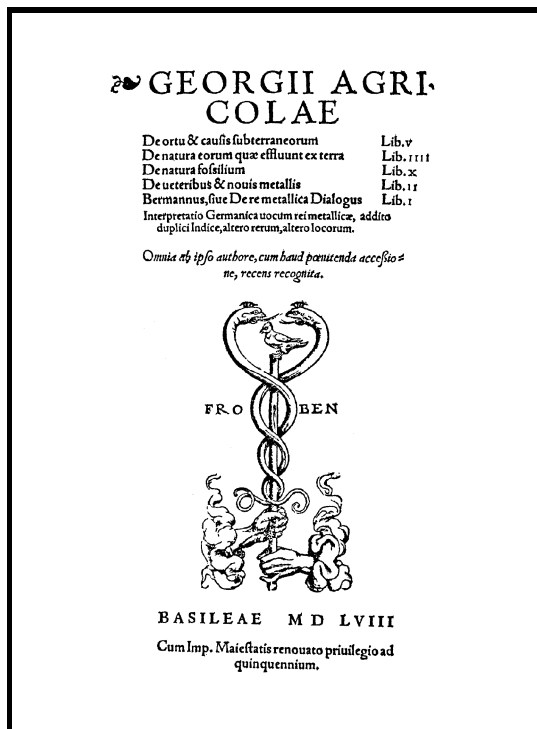
Published as volume 4 of the series, Georgius Agricola-Ausgewählte Werke, this is a modern translation by Georg Fraustadt of *De Natura Fossilium Libri X* (Basileae, 1546), together with much supplementary material in the form of historical essays by Hans Prescher and Georg Fraustadt. Included is information placing the work in its time as well as a useful Greek-Latin-German mineralogical dictionary.

Mark Chance Bandy. (BORN: Redfield, Iowa, U.S.A., 22 July 1900; DIED: Wickenburg, Arizona, U.S.A., 3 June 1963) *American mining engineer & geologist*. Bandy was educated in mining engineering and geology at Drake University (B.S., 1922), Columbia University (M.A., 1923), and Harvard (Ph.D., 1938). He worked as an engineer with Bethlehem Steel (1927-8), the Chile Exploration Co., (1929-34), and the Patino Mines (1936-47). He became an engineer, chief geologist, and general manager with ECA-Mining Engineers (1949-51) and general manager of the Rhodesia Copper Ventures (1952-4). He lectured at St. Andrews University, Scotland in 1954-5. He was a Fellow in the Society of Economic Geologists and a member American Mineralogical Society, as well as an honorary member of the Mineralogical Society of Great Britain. The mineral "Bandyite" was named in his honor in 1935. His large and fine mineral collection accumulated through his many travels was acquired in 1963 by the Natural History Museum of Los Angeles County, where it is preserved today.

REFERENCES: Agricola Bibliographie: 686-94. • BL: [604.h.1.(2.)]. • Dana's 7th (Bibliography): 65. • *Freilich Sale Catalog*: no. 11. • Hoover Collection: no. 14. • *Horblit*: no. 2a. • *Roller & Goodman, Catalogue*, 1976: 1, 16. • *Wellcome Catalog (Books)*: 1, no. 62. (Bandy) Bandy, M.C., "Collector's diary: Chuquicamata and the nitrate pampa—Mark Chance Bandy, 1935," *Mineralogical Record*, 14 (1983), no. 5, 355-61. • Bandy, M.C., "Collector's diary: Iquique, Copiapo, and Chañarcillo—Mark Chance Bandy, 1935," *Mineralogical Record*, 15 (1984), no. 1, 67-74. • Bandy, M.C., "Collector's diary: Santiago to Valparaiso—Mark Chance Bandy, 1935," *Mineralogical Record*, 15 (1984), no. 3, 157-62. • *Bulletin of the Geological Society of America*: 77 (1964), no. 2, 13. • Cleevly, *World Palaeontological Collections*, 1983: 47. • Jones, R.W., "The Mark Chance Bandy collection," *Mineralogical Record*, 4 (1973), no. 6, 277-81. • Wilson,

AGRICOLA

W.E. and A. Petrov, "Famous mineral localities: Cerro Rico de Potosí, Bolivia," *Mineralogical Record*, **30** (1999), no. 1, 9-36 [see p. 34]. • *World Who's Who in Science*: 104.



DE ORTU & CAUSIS SUBTERRANEORUM, 1558

50. 2nd edition, 1558: Georgii Agri- | colae | De ortu & causis subterraneorum | Lib. V | De natura eorum quae effluunt ex terra Lib. IIII | De natura fossilium Lib. X | De ueteribus & nouis metallis Lib. II | Bermannus, sive De re metallica Dialogus Lib. I | Interpretatio Germanica uocum rei metallica, addito | duplici Indice, altero rerum, altero locorum. | Omnia ab ipso autore, cum baud poenitenda accebio= | ne, recens recognita. | [ornament] | Basileae M D LVIII | Cum Imp. Maiestatis renouato priuilegio ad quinquennium.

2^o: a⁴ A-Z⁶ Aa-Ss⁶ Tt⁸; 258ℓ.; [1]-[8], 1-470, [2] blanks, [40] index p. COLOPHON (Tt8r): "Basileae In Officina Frobeniana | per Hieronymvm Frobenivm, & Nicolaum Epi- | scopivm, Mense Septembri, Anno | M. D. LVIII." Froben printers device is on the title page and 2T8v. PAGE SIZE: 320 x 192 mm.

CONTENTS: [1-2], Title page, verso blank.; 3-[5], "Illvstriss- Et Po- | tentiss. Dvci Saxoniae, | "—dated April M.D.LV. [1545].; 6, "Adami Siberi Elegia Ad | ..."; [7]-[8], "[ornament] | Illvstri Saxoniae Dvci, | ..."—dated M.D.XLIII. [1544].; 1-82, "Georgii Agrico- | lae De Ortiv Et Cav= | sis Saxoniae Dvci | ..."—dated M.D.XLV. [1545].; 88-162, "[ornament] Georgii Agricola | De Natvra Eorvm Qvae Ef- | fluunt et terra, | ..." 163-165, "[ornament] Illvstri Saxoniae Dvci | ..."—dated M.D.XLVI. [1546].; 166-380, "[ornament] Georgii Agricola | De Natvra Fossilivm, | ..." 381-383, "Claro Et Docto Viro D- | ..."—dated M.D.XLVI. [1546].; 384-410, "[ornament] Georgii Agricola | De Veteribvs Et Novis Metallis." 411, "Des Erasms Rot. Ornatissimis Fratib. | Andreæ & Christophoro à Conritz. s."—dated M.D.XXIX. [1529].; 412-413, "[ornament] Nobili Et Clarissimo vi= | ro Henrico a Conritz, ..." 414-460, "[ornament] Georgii

Agricolae | Bermannvs, Sive De Re Me= | tallica." 461-470, [Rervm Metallicarvm Interpretatio].; [2 pgs/=2Q6], Blanks.; [40 pgs/=2Rr-2T8r], "Index In Vniuersvm | Hoc Opvs, Geminvs, Alter Rervm, | alter locorivm. Acprimo, rerum."

VERY SCARCE. This is the second edition of Agricola's collected works on mineralogy, geology and mining, and it is best edition being the last to be corrected and revised by the author. It consists of six separate treatises that had each appeared previously.

[A]. *De Ortu & Causis Subterraneorum* in five books has always been published in the company of other works. Its first appearance was in 1546, in the first edition of these collected treatises. However, in the present edition, the text has been revised, with new material added by Agricola.

[B]. *De Natura Eorum quae Effluunt ex Terra* in four books also had its first appearance in the first edition of 1546.

[C]. *De Natura Fossilium* in ten books is Agricola's most important statement on mineralogy. It has always been printed in combination with other works, and its first appearance was in the first edition of these collected treatises published in 1546. However, in this edition, Agricola has considerably revised the text and added new material.

[D]. *De Veteribus & Novis Metallis* in two books is a short work that also first appeared in the 1546 edition of collateral works.

[E]. *Bermannus, sive De Re Metallica Dialogus* in one book was Agricola's first published work in relation to mining, which was first published as an independent work at Basel in 1530. In this edition, Agricola makes many important changes and adds some new material, but later editions often reprint the text of the 1530 edition.

[F]. *Interpretatio Germanica uocum rei Metallica* is a translation list of German equivalents for the Latin mineralogical terms used by Agricola in his numerous writing. It first appeared in the collected edition of 1546, being included in all subsequent editions.

REFERENCES: Agricola Bibliographie: 700. • BL: [443.h.3]. • Dana's 7th (Bibliography): 65. • Hoover Collection: no. 15. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Shaaber, *Sixteenth Century Imprints*, 1976: A-74. • Wellcome Catalog (Books): 1, no. 63.

51. 3rd edition, 1612: Georgii Agri- | colae, | De ortu & causis subterrancorum lib. V. | De natura eorū, quae effluunt ex terra lib. IV. | De natura fossilium lib. X. | De veteribus & novis metallis lib. II. | Bermanus, sive de re metallica Dialogus. | Interpretatio Germanica uocum rei | metallica. | Additio Indice foecundissimo, | Plurimes jam annos à Germanis, & externarum quoque | nationum doctiſſimis Viris, valdè defider ati | & expetiti; | Nunc verò in rei metallica studiosorum gratiam re- | censi, in certa capita distributi, capitum argumentis, | & nonnullis icholiis marginalibus illustrati, | à | Joanne Sigfrido Philos: | [...2 lines of titles and memberships...] | Accesserunt | e metallicis rebus & nominibus observationes variae Seta- | ditae, ex schedis Georgii Fabricii, quibus ea | petiſſimum explicantur, quae Georgius Agricola praeterijt. | [rule] | Wittebergae | Sumptibus Zachariae Schüreri Bibliopolae, | Typis Andreæ Rudingeri, 1612.

4^o: [24], 1-1014, [112] p.

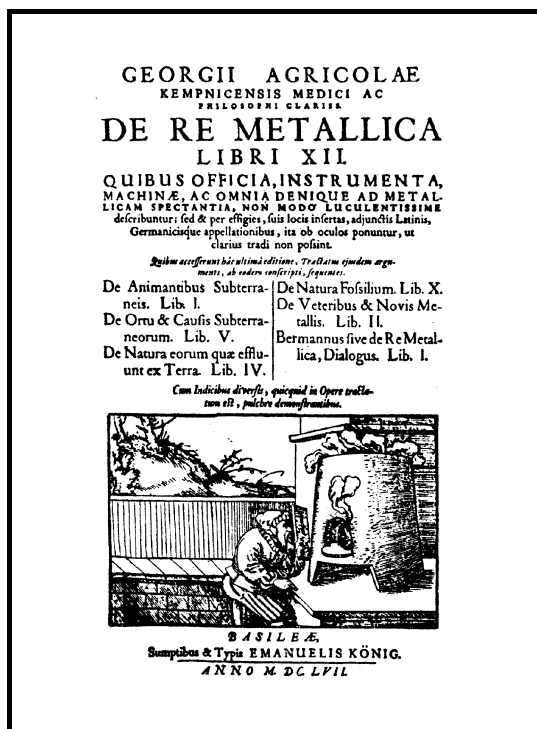
CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "...Domino Friderico Ulrico..."; [6 pgs], "Praefatio..."; [1 pg], "...Sigfrido..."; [5 pgs], "... Sigfrido..."; [1 pg], "Clarissimo ... Sigfrido..."; [1 pg], "Ad ... Sigfridum..."; [1 pg], "In Novam Agricolae..."; [3 pgs], "Illvstri..."; [3 pgs], "Adamvs Sibervs..."; 1-164, "...De Ortu & Causis Subterraneorum..."; 165-328, "...De Natura eorum..."; 329-775, "...De Natvra Fossilivm..."; 776-842, "...De Veteribvs..."; 843-947, "...Bermannvs..."; 948-949, "...Agricola ... Meurero..."; 950-970, "Rerum Metallicarum Interpretatio..."; 971-1014, "De Metallicis Rebus Ac Nominibus Observationes...";

[112 pgs], "Index."

SCARCE. This edition of some of the collected works of Agricola was brought together and edited by Johann Sigfrid [see note below]. The editor has renumbered most of the sections and made the text less exact than Agricola's original. In addition, Georg Fabricius 1565 work on metals is included.

Johann Sigfrid. (BORN: 1556; DIED: 1623) *German physician.* Besides having a medical practice, Sigfrid was professor of anatomy at the University of Helmstedt.

REFERENCES: Agricola Bibliographie: 704. • BL: [990.a.3.(1.)]. • Hoover Collection: no. 16. • VD17: 14:643489P. (Sigfrid) DBA: I 1185, 39. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.



DE RE METALLICA LIBRI XII, 1657

52. 4th edition, 1657: Georgii Agricolæ | Kempnicensis Medici Ac | Philosophi Clariss. | De Re Metallica | Libri XII. | Quibus Officia, Instrumenta, | Machinæ, Ac Omnia Denique Ad Metal- | licam Spectantia, Non Modo Luculentissime | describuntur; sed & per effigies, suis locis infertur, adjunctis Latinis, | Germanicisque appellationibus, ita ob oculos ponuntur, ut | clarius tradi non possint. | Quibus accesserunt hâc ultimâ editione, Tractatus ejusdem argu- | ments, ab eodem conscripti, sequentes. | [The next 6 lines separated by a vertical bar into 2 columns.] | [First column:] De Animantibus Subterra- | neis. Lib. I. | De Ortu & Causis Subterra- | neorum. Lib. V. | De Natura eorum quæ efflu- | unt ex Terra. Lib. IV. | [vertical rule] | [Second column:] De Natura Fossilium. Lib. X. | De Veteribus & Novis Me- | tallis. Lib. II. | Bermannus sive de Re Metal- | lica, Dialogus. Lib. I. | Cum Indicibus diversis, quicquid in Opere tracta- | tume est, pulchrè demonstrantibus. | [vignette] | Basileæ, | Sumptibus & Typis Emanuelis König. | [rule] | Anno M. DC. LVII.

2° (in 6s): (:)⁶ a-z⁶ A-Z⁶ Aa-Nn⁶ α-δ⁶ ε² ζ³ η⁶ θ⁶ ι⁶; 405ℓ.; [12], 1-708, [90] p., 2 folded woodcuts, 269

text woodcuts. Woodcut title page vignette. Page 655 misprinted 565. PAGE SIZE: 330 x 200 mm.

CONTENTS: [2 pgs/=(¹)1rv], Title page, verso blank.; [4 pgs/=(²)2r-(³)3v], "Illvstrissimis Et | Potentissimis Saxoniae | Ducibus, ..."—dated M.D.L.; [4 pgs/=(⁴)4r-(⁵)5v], "Georgivs Fabricius | In Libros Metallicos | ..."; [2 pgs/=(⁶)6rv], Blanks.; 1-477, "Georgii Agricolæ, | De Re Metallica | ..."; 478, "Catalogus."; 479, "Georgius Agricola | Georgio Fabricio."—dated M.D. XLVIII.; 480-492, "Georgii Agricolæ | De Animantibus | Subterraneis."; 492-527, "... De Ortu Et Causis Sub- | terraneorum."; 528, "Quoniam Persaepe Scriptorum ..." 529-532, "Illvstri ... Mauricio ... Agricola ..."; 533-566, "... De Natura Eorum Quæ | Effluunt Ex Terra."; 566, "Scriptores, | ..."; 567-568, "Illvstri ... Mauricio ... Agricola ..."; 569-664, "... | De Natura Fossilium, | ..."; 664, "Scriptores ..."; 665-666, "Claro ... Georgio Comerstadio ..."; 667-678, "De Veteribus Et | Novis Metallis."; 679, "Des. Erasmus Rot. ... Andreae Et Christophoro À Conritz."; 680-681, "Nobili ... Henrico A Conritz ... Petrus Plateanus ..."; 682-701, "... Bermannus, Sive De | Re Metallica. | ..."; 702, "... Agricola | Volfgango Meurero ..."; 702-708, "Sequuntur Rerum, | De Quibus Scribimus ..."; [17 pgs/=(α)1r-β3r], "Rei Metallicæ | Nomenclatvra ... De natura fossilium ..."; [14 1/2 pgs/=(β)3v-γ4v], "Nomenclatura Secun- | da ..."; [20 pgs/=(γ)4v-ε2v], "Index Rerum Ac Ver- | borum in Lib. De Re Me- | tallica."; [1/2 pg/=(ε)2v], "Fodinarum Omnium ... Catalogus."; [2 pgs/=(ζ)1rv], "Animantium | Nomina Latina ... In Libro De Subterraneis ..."; [4 pgs/=(ζ)2r-ζ3v], "Index | In Librum De Subter- | raneis Animantibus ..."; [20 1/2 pgs/=(η)1r-φ5r], "Index Geminus In | Lib. V. De Ortu...Lib. IV. De Natura eorum ..."; [11 1/2 pgs/=(φ)5r-14v], "Index Locorum | In Agricola."

SCARCE. The first collected edition of Agricola's works on mines, metallurgy, mineralogy and geology creating in effect an opera omnia of his technological writings. Contained therein are the fourth Latin editions of *De Re Metallica* and *De Animantibus Subterraneis*, and the sixth Latin editions of *De Ortu & Causis Subterraneorum*, *De Natura eorum quæ effluunt ex Terra*, *De Natura Fossilium*, *De Veteribus & Novis Metallis*, and *Bermannus sive de Re Metallica, Dialogus*. The original woodcuts used in the *De Re Metallica* (1st ed., Basileæ, 1556) are a little worse for wear after over a century of life and the pagination is identical to the first printing since the 269 woodcuts have to be accommodated by the text. Only the *De Animantibus Subterraneis* had previously been published with the *De Re Metallica*.

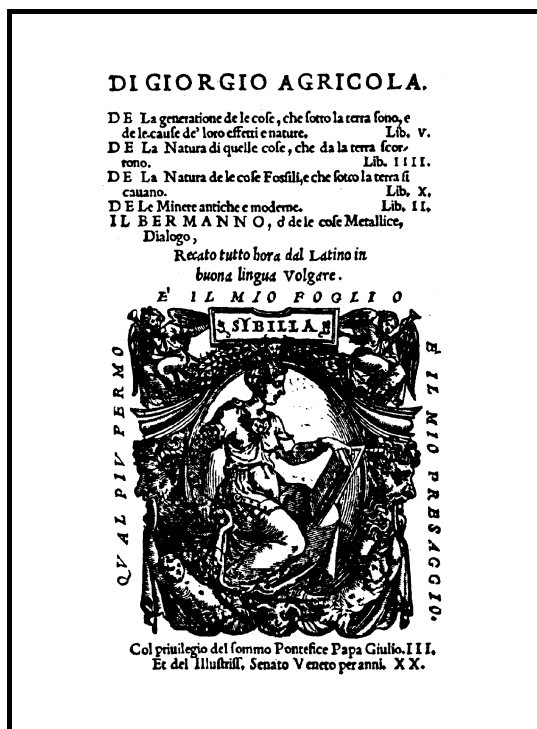
REFERENCES: Agricola Bibliographie: 708-10 & 770-2. • BL: [459.a.14.].

Italian edition

53. 1550: Di Giorgio Agricola. | De La generatione de le cose, che sotto la terra sono, e | de le cause de'loro effetti e nature. Lib. V. | De La Natura di quelle cose, che de la terra scor- | rono. Lib. IIII. | De La Natura de le cose Fossili, e che sotto la terra si | cauano. Lib. X. | De Le Minere antiche e moderne. Lib. II. | Il Bermanno, ò de le cose Metalliche, | Dialogo, | Recato tutto hora dal Latino in | buona lingua Volgare. | [Vignette of Sybilla, surrounded with the following text: Qv Al Piv Fermo È il Mio Foglio È il Mio Presaggio.] | Col priuilegio del sommo Pontefice Papa Giulio. III. | Et del Illustriss. Senato Veneto per anni. XX.

8°: [a]-c⁸ d⁴ A-Z⁸ Aa-Zz⁸ Aaa-Mmm⁸ Nnn⁴; 496ℓ.; [56] p., 467ℓ., [2] p. PAGE SIZE: 154 x 102 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Ivlivs Papa III."; [1 pg], "1549. die. 15 Octobris in Cons. Rogatorium."; [7 pgs], "Alreverendis- | simo & Illustrissimo Monsi- | gnor'il Signor Cardi- | nale di Monte."; [11 pgs], "Tavola de la Materie, ..."; [15 pgs], "Tavola Di Quanto in Qve | sto libro si contiene per ordine di Alphabeto."; [1 pg], Blank.; [6 pgs], Dedication.; [2 pgs], Blanks.; [Leaves 1-467], Text.; [1 pg], Ornamental printer's device, "Sybilla.";



DE LA GENERATIONE DEL LA COSE, 1550

[1 pg], Blank.

VERY SCARCE. Translation by Michele Tramezzino of *De Ortu & Causis Subterraneorum* (Basileæ, 1546).

REFERENCES: Agricola Bibliographie: 694. • BL: [972.e.1.]. • *Freilich Sale Catalog*: no. 12. • Hoover Collection: no. 12. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Shaaber, *Sixteenth Century Imprints*, 1976: A-75. • Wellcome Catalog (Books): 1, no. 64.

German edition

54. 1806-12: Georg Agrikola's | aus Glauchau | Mineralogische Schriften | übersezt und mit | erläuternden Anmerkungen und Ercursionen | begleitet | von | Ernst Lehmann, | Bergamts=Assessor, Berg= Gegen= und Receßschreiber | in dem Kurfürstl. Sächs. Bergamte | Voigtsberg. | [tapered rule] | Erster Theil. | Von den Entstehungsursachen der unterirdischen | Körper und Erscheinungen. | (De Ortv Et Causis Svbtterraneorum.) | [rule] | Mit illuminirten Kupfern und Tabellen. | [rule] | Freyberg, 1806. | bey Craz und Gerlach.

[TITLE OF PART 2 READS:]

Georg Agrikola's | | Zweyter Theil. | Von den Eigenschaften der Körper, die aus dem | Innern der Erde auf die Oberfläche her= | vordringen. | (De Natvra Eorum, Qvae Efflvvnt Ex | Terra.) | [tapered rule] | Freyberg, 1807. | bey Craz und Gerlach.

[TITLE OF PART 3, VOLUME 1 READS:]

Georg Agrikola's | | Dritter Theil. | Oryktognosie. | (De Natvra Fossilivm.) | [rule] | Erster Band, | enthaltend die ersten 5 Bücher. | [tapered rule] | Freyberg, 1809. | bey Craz und Gerlach.

[TITLE OF PART 3, VOLUME 2 READS:]

Georg Agrikola's | | Dritter Theil. | Oryktognosie. | (De Natvra Fossilivm.) | [rule] | Zweyter Band, | enthaltend die ersten 5 Bücher. | [tapered rule] | Freyberg, 1810. | bey Craz und Gerlach.

[TITLE OF PART 4 READS:]

Georg Agrikola's | | Vierter Theil. | Geschichte der Metalle. | (De Veteribus Et Novis Metallis.) | [tapered rule] | Freyberg, 1812. | bey Craz und Gerlach.

4 parts in 5 vols. [VOL 1: 1806] 8°: *8 *** A-2C⁸ 2D⁴; ??ℓ.; [i]-xxxii, [1]-424 p., one colored plate (geological cross section), 10 text figures, 3 tables. [VOL 2: 1807] 8°: π⁸ b⁸ c² A-Q⁸ R²; ??ℓ.; [i]-xxxvi, [1]-260 p. [VOL 3, part 1: 1809] 8°: π⁸ A-X⁸ Y⁴; ??ℓ.; [i]-xvi, [1]-342 p., 19 tables. [VOL 3, part 2: 1810] 8°: π⁵ A-U⁸ X⁴ Y⁴; ??ℓ.; [i]-x, [1]-335 p. [VOL 4: 1812] 8°: a⁴ A-F⁸ G-M⁴; ??ℓ.; [i]-viii, [1]-144 p., 8 folding tables (bound at page 64). PAGE SIZE: 206 x 114 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-xv, "Vorbericht des Uebersetzers," signed E. Lehmann, 29 January 1806.; xvi-xxiv, "Inhaltsanzeige."; [xxv], Sectional title page, "Georg Agrikola | von den | Entstehungsursachen | der | unterirdischen Körper und | Erscheinungen | (De Ortv Et Causis Svbtterraneorum.) | übersetzt und mit | erläuternden Anmerkungen und Ercursionen | begleitet | von | Ernst Lehmann, | [...3 lines of titles and memberships...]."; [xxvi], Blank.; [xxvii]-xxxii, Dedication, sighing Georg Agricola, 1 March 1544.; [1], "Georg Agricola | Mineralogisch Schriften. | [rule] | Erster Theil. | [rule]."; [2], Blank.; [3]-417, Text.; 418-424, "Erläuterungen zum fünften Buche."

[Vol 2] [i-ii], Title page, verso blank.; [iii-iv], Another title page, "Georg Agrikola | Von den Eigenschaften der Körper, die aus | dem Innern der Erde auf die Ober= | fläche hervordringen. | (De Natvra Eorum, Qvae Efflvvnt Ex | Terra.) | ... "; [v], "Zueignungsschrift | an | Herrn | Rector M. Schwarze | in Göritz."; [vi], Blank.; [vii]-[x], Text of dedication.; [xi]-xiv, "Vorerinnerung."; [xv], "Agrikola's | Zueignungsschrift | an den | Kurfürsten Moritz."; [xvi], Blank.; [xvii]-xxxii, Text of Agricola's dedication, dated 25 October 1545.; xxxiii-xxxvi, "Inhalt des zweyten Theils."; [1], "Georg Agrikola's | Mineralogischen Schriften. | [rule] | Zweyter Theil. | [rule]."; [2], Blank.; [3]-260, Text.

[Vol 3, part 1] [i-ii], Title page verso blank.; [iii-iv], Another title page.; [v]-xii, "Agrikola's | Zueignungsschrift | an den | Kurfürsten Moritz."—dated 13 February 1546.; [xiii]-xvi, "Inhalts=Verzeichnis | zum | ersten Bande des dritten Theiles."; [1], "Georg Agrikola's | Mineralogischen Schriften. | [rule] | Dritter Theil. | [rule]."; [2], Blank.; [3]-342, Text.; [1 pg], "Bey den Verlegen ist von eben diesem Ver= | fasser zu haben."; [1 pg], Blank.

[Vol 3, part 2] [i-ii], Title page, verso blank.; [iii-iv], Another title page.; [v]-x, "Inhalt."; [1]-335, Text.; [1 pg], Blank.

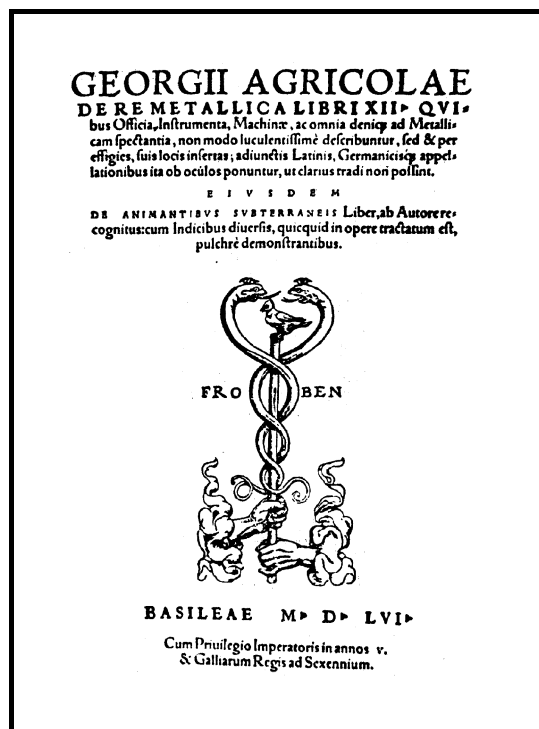
[Vol 4] [i-ii], Title page, verso blank.; [iii]-viii, "Agrikola's | Zueignungsschrift am den Hofrath | D. Georg Kommerstädt."—dated 7 March 1546.; [1]-64, Text (=Geschichte der Metalle.); [65]-96, "Verzeichnis | der im Agrikola vorkommenden Sachen, | wie solche zu seiner Zeit sind deutsch | genannt worden."; [97]-144, "Register."

RARE, especially in complete sets. Under the direction of the Freiberg publishing house of Craz & Gerlach, Ernst Lehmann [see note below] prepared this translation of Agricola's mineralogical writings. The first volume is a translation of *De Ortv Et Causis Svbtterraneorum*, while the second is a rendering of *De Natura Eorum, Quæ Effluunt Ex Terra*, the third in two parts is of *De Natura Fossilium* and the fourth is of *De Veteribus Et Novis Metallis*. Lehman has added commentary notes to the text.

Ernst Johann Traugott Lehmann. (BORN: Baruth, Germany, 10 March 1777; DIED: Freiberg, Germany, 6 December 1847) *German mining expert*. Lehmann held a variety of positions in mining at Freiberg, before being named an instructor and finally professor of mining at the famous Bergakademie of the city. He authored a systematic encyclopedia of mining science in 1804.

REFERENCES: BL: [974.b.23.]. • Dana's 7th (Bibliography): 65. • Hoover Collection: nos. 11, 29-31. • Leonard's *Taschenbuch*: 2, 323 [review, part one]. (Lehmann)

ADB. • DBA: I 749, 62-67; II 796, 305. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Poggendorff: 1, col. 1410. • WBI.



DE RE METALLICA, 1556

De Re Metallica

55. — Latin, 1556 [First edition].

Georgii Agricolae | De Re Metallica Libri XII. Qvi= | bus Officia, Instrumenta, Machinae, ac omnia deniq; ad Metallum spectantia, non modo luculentissime describuntur, sed & per effigies, suis locis insertas; adiunctis Latinis, Germanicisq; appellationibus ita ob oculos ponuntur, ut clarius tradi non possint. | Eivsdem | De Animantibus Subterraneis Liber, ab Auctore recognitus: cum Indicibus diuersis, quicquid in opere tractatum est, | pulchrè demonstrantibus. | [Froben's printer device] | Basileae M. D. LVI. | Cum Priuilegio Imperatoris in annos v. | & Galliarum Regis ad Sexennium.

2°: α⁶ a-z⁶ A-Z⁶ Aa-Bb⁶ (α⁶ blank); 294ℓ.; [12], 538 (i.e., 502), [74] p. Woodcut printer's device on title & on verso of last leaf, two woodcut plates & about 270 splendid woodcuts (many full-page) in the text. PAGE SIZE: 330 x 225 mm.

CONTENTS: [2 pgs], Title page, verso "Henry ... roy de France", dated 18 February 1553.; [4 pgs], "Illystriss ... Saxonaie Dvciibus."; [4 pgs], "Georgivs Fabricivs ... Ad Lectorem."; [2 pgs], Blank.; [1]-477, "Georgii Agrico

lae De Re Metallica."; 478, "Georgivs Agricola Georgio Fabricio S.P.D."; 479-538 (i.e., 502), "Georgii Agricoli De Animantibus subterraneis Liber, ab auctore recognitus."; [21 pgs], "Rei Metallicae Nomina Latina Graeca- | qve Germanice Reddita..."; [17 1/2 pgs], "Index Secvndvs ..."; [24 1/2 pgs], "Index Rerum Ac Ver | Borvm In Lib. De Re Metall- | ca."; [1/2 pg], "Fondinarm O- | mniū, quæ in lib. XII. de re Metallica numerantur, | Catalogvs."; [2 1/2 pgs], "Animantivm Nomi- | na Latina Graecaqve Germanice reddita."; [5 1/2 pgs], "Index in Librv | De subterraneis animantibus secundus."; [1 pg], "Errata," followed by Froben's printers' device.

VERY SCARCE. *De Re Metallica* is the first systematic treatment of mining and metallurgy and one of the most important technological volumes published in the sixteenth century. Written by Agricola over the course of 20 years, the manuscript was probably completed by 1550; however, the hundreds of woodcut used for illustration delayed publication until after Agricola's death. Everything known by Agricola concerning mining and metallurgical techniques is contained therein, including sections on prospecting, mine construction and administration, procedures for the manufacture of glass, alum and sulfur. The volume is further enhanced by the inclusion of two hundred and seventy-three magnificent, large woodcut illustrations by Hans Rudolf Manuel Deutsch depicting a large variety of mine and refinery processes, including water powered pumps, ore haulage, mine ventilation, furnace stoking, ore transportation, etc.

A large number of minerals are mentioned by Agricola, including many like bismuth for the first time. In addition, the mining and metallurgical processes described and illustrated are still at there core used even today. Also included are the author's last statement in Book V of physical geology, including his theories of the influence of water and wind on the shaping of the landscape, and a rather clear account of the stratification of rocks he saw within mines. His description of how the action of water erodes the landscape much in advance of his age.

REFERENCES: BL: [C.81.h.11.]. • Dana's 7th (Bibliography): 65. • Dibner, *Heralds of Science*, 1955: 88. • DSB: 1, 77-9. • Freilich Sale Catalog: no. 13. • Hoover Collection: no. 17. • Horblit: no. 2b. • Partington, *History of Chemistry*, 1961-70: 2, 46-55. • PPM: *Printing and the Mind of Man*: no. 79. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Shaaber, *Sixteenth Century Imprints*, 1976: A-76. • Sparrow, *Milestones of Science*, 1972: p. 8 & plate 26. • Wellcome Catalog (Books): 1, no. 67.

56. 2nd edition, 1561: Georgii Agricolae | De Re Metallica Libri XII Qvi= | bvs Officia, Instrvmenta, Machinae, Ac Omnia Deni= | que ad Metallum spectantia, non modo luculentissime describuntur, sed & | per effigies, suis locis insertas; adiunctis Latinis, Germanicisq; appellationibus ita ob oculos ponuntur, vt clarius tradi non possint. | Eivsdem | De Animantibus Subterraneis Liber, Ab Auctore | recognitus: cum Indicibus diuersis, quicquid in opere tractatum est, | pulchrè demonstrantibus atq; omnibus nunc iterum ad | archetypum diligenter restitutus et castigatis. | [ornament] | Basileae M. D. LXI. | Cum Priuilegio Imperatoris in annos v. | & Galliarum Regis ad sexennium.

2°: α⁶ (α⁶ blank) a-z⁶ A-Z⁶ Aa-Bb⁶; 294ℓ.; [12], 1-502, [72] p. PAGE SIZE: 324 x 220 mm.

CONTENTS: [2 pgs/α1], Title page, verso blank.; [4 pgs/α2r-α3v], Dedication, dated M.D.L.; [4 pgs/α4r-

AGRICOLA

α5v], “Georgivs Fabricivs In Li= | bros Metallicos ...”; [2 pgs/=α6], Blanks.; 1-477, Text of *De Re Metallica*.; 477, “Scriptorvm ...”; 478, “Georgivs Agricola Geor= | gio Fabricio ...”; 479-502, “... De Animantibvs | Svbtterraneis.”; [19 pgs/=T6r-X4r], “Rei Metallicae | Nomina Latina Graeca Qve | Germanicae ...”; [17 1/2 pgs/=X4v-Z1r], “Index Secvndvs.”; [25 1/2 pgs/=Z1r-Bb1v], “Index Rervm Ac | Verborvm In Lib. De Re | Metallica.”; [8 pgs/=Bb2r-Bb5v], “Animantivm No- | mina Latina ...”; [1 pg/=Bb6r], Colophon: “Basilea In Officina Frobeniana, per | Hier. Frobenivm Et Nic. Episcopivm, | Mense Martio, Anno | Domini M.D. LXI.” [1 pg/=Bb6v], Froben’s printer device.

SCARCE. Essentially, this is a reprint of the original 1556 edition, using the same woodcut blocks as the original.

Reprint, 1959: *De Re Metallica*. ... Roma: Edindustria-Editoriale S.P.A., 1959. 2°: 6, 502, [74] p.

REFERENCES: Adams, *Cambridge Books*, 1967: A-350. • *Agricola Bibliographie*: 754-64. • BL: [443.h.4.]. • *Freilich Sale Catalog*: no. 15. • Hoover Collection: no. 18. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Wellcome Catalog (Books): 1, no. 68.

57. 3rd edition, 1621: *Georgii Agricolae | Kempnicensis, Medici ac | Philosophi Clariss. | De Re Metallica | Libri XII. | Quibus Officia, Instrumen- | ta, Machinae Ac Omnia Denique Ad Me- | tallicam Spectantia, Non Modo Luculentissi- | nie describuntur; sed & per effigies, suis locis infertas, adjunctis La- | tinis, Germanicisq; appellationibus, ita ob oculos po- | nuntur, ut clarius tradi non possint. | Ejusdem, | De Animantibus Subterraneis | Liber, ab Autore recognitus. | Cum Indicibus diversis, quicquid in Opere tra- | ctatum est, pulchrè dem onstrantibus. | [vignette] | Basileæ Helvet. | Sumptibus itemq; typis chalcographicis Ludo vici Regis. | [rule] | Anno MDCXXI. 2°: [12], [1]-538 (i.e., 502), [60] p.*

CONTENTS: [2 pgs], Title page, verso “Henry ... roy de France”, dated 18 February 1553.; [4 pgs], “Illvstriss ... Saxonaie Dvcibvs.”; [4 pgs], “Georgivs Fabricivs ... Ad Lectorem.”; [2 pgs], Blank.; [1]-477, “Georgii Agricola De Re Metallica.”; 478, “Georgivs Agricola Georg- | gio Fabricio S.P.D.”; 479-538 (i.e., 502), “Georgii Agricola De Re Animantibus | subterraneis Liber, ab autore recognitus.”; [21 pgs], “Rei Metallicae | Nomina Latina Graeca- | que Germanice Reddita.”; [17 1/2 pgs], “Index Secvndvs ...”; [24 1/2 pgs], “Index Rerum Ac Ver | Borvm In Lib. De Re Metalli- | ca.”; [1/2 pg], “Fondinarm O- | mniū, quæ in lib. XII. de re Me | tallica numerantur, | Catalogvs.”; [2 1/2 pgs], “Animantivm Nomi- | na Latina Graecaqve Ger- | manice reddita.”; [5 1/2 pgs], “Index in Librṽm | De subterraneis animan- | tibus secundus.”; [1 pg], “Errata,” followed by Froben’s printers’ device.

SCARCE. Essentially, this is a reprint of the original 1556 edition, with some of the original woodcuts showing some considerable wear.

REFERENCES: *Agricola Bibliographie*: 764. • BL: [1565/156.]. • Hoover Collection: no. 19. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Wellcome Catalog (Books): 1, no. 69.

58. 4th edition, 1657: *De Re Metallica* ... Basiliæ, 1657.

VERY SCARCE. For detail, see *De Natura Fossilium* (Basiliæ, 1657) in previous entries.

German editions

59. First edition, 1557: *Vom Bergk= | werck xii Bücher dar= | in alle Empter/ Insturment/ Ge | zeuge/ vnnd alles zū disem handel gehörig/ mitt schönen figuren vor= | bildet/ und klårlich beschriben seindt/ erstlich in Lateinischer sprach/ durch den | Hochgelerten vnd Weittberümpften Herrn Georgium Agricolum/ Doctorn | vnnd Bürgermeistern der Chursürstlichen statt Kempniß/ jezundt oder ver= | teüschet/ durch den Achtparen vnnd Hochgelerten Herrn Philip= | pum Bechium/ Philosophen/ Artzet vnd in der | Loblichen Universitet zū Ba= |*



VOM BERGKWERCK XII BÜCHER, 1557

sel Professorn. | [ornament] | Getruckt zū Basel durch Jeronymus Froben/ vnd Niclausen | Bischoff/ im 1557. jar mitt Keiserlicher Freyheit.

2°: [8], I-CCCCXCI, [12] p. Text woodcut illus. and one folding plan.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], Forword.; I-CCCCXCI, Text of translation.; [1 pg], Blank.; [8 pgs], “An den Gunstigen leser...”; [1 pg], “Verzeichniß/ deren wörtern/ so im | läsen übersähen.” at end “Getruckt in der Loblichen statt Basel, durch Jero | nymus Froben, vnnd Niclaus Bi | schoff im jar M.d.lvij.”; [1 pg], Blank.; [1 pg], Froben’s device.

VERY RARE. Translated by Philip Bech [see note below] from *De Re Metallica* (Basiliæ, 1556), and containing the same woodcut illustrations mostly by Rudolf Manuel Deutsch as the original edition. The Elector Augustus commanded that Agricola have *De Re Metallica* rendered into German so that the mine workers, who did not know Latin, could make use of the work. It is a bad rendition, by one who knew nothing of the science, and who had no appreciation of the special Latin terms coined by Agricola, most of which he translated literally. For example, the Hoover’s call it “a wretched translation.” But Bech, whose translation it was, admitted in many a point I am not satisfied with my translation. This is due to the shortness of the time and because I have not translated from Latin into German in former times. None the less, the text of this German edition was reprinted essentially unchanged in 1580 and again in 1621, with only new titles and preliminaries. These German editions appear to be much rarer than the Latin originals, no doubt owing to the fact that most miners and metallurgists found it more convenient to read the work in the vernacular.

Facsimile reprint, c1985: *Vom Bergkwerck xij Bücher darinn alle Empter, Instrument, Bezeuge, vnnd alles zū disem Handel gehörig ... erstlich in Lateinischer Sprach durch ... Georgium Agricolum ... jezundt aber verteüschet durch*

... *Philippum Bechium* ... Weinheim, Acta humaniora der VCH, c1985. 2 vols. [v.1] Facsimiledruck. [v.2] Kommentarband. [Arizona State University, Tempe, TN617 .A4x 1557a.]

Philipp Bech. (BORN: Freiburg, Breisgau, Germany, 1521; DIED: Basel, Switzerland, 1560) *German physician.* Bech studied at Basel, Wittenberg and Leipzig. He became professor of Greek and logic at the University of Basel in 1553, before being appointed a professor of medicine and philosophy.

REFERENCES: Agricola Bibliographie: 771. • BL: [443.h.6.(2.)]. • *Freilich Sale Catalog*: no. 14. • Hoover Collection: no. 22. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Wellcome Catalog (Books): 1, no. 70. (Bech) DBA: I 68, 186-187. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.



BERCKWERCK BUCH, 1580

60. 2nd edition, 1580: [In black:] Berckwerck Buch: | [in red:] Darin nicht Allain | alle Empter, Instrument Ge= | zeug/ und alles/ so zu diesem Handel ge= | [in black:] hörig mit figuren vorgebildet/ und klärlich beschriben. Sondern auch/ | wie ein rechverstendiger Berckmann seyn sol/ vnd die Gäng außzurichten seyen. Item/ von | allerley Gängen/ Klüfften/ vnd absetzen deß Gesteins. Von den Massen/ vnd andern Gebewen. Von allerley Trögen/ was= | sergeheussen/ wasserkunst/ Pompen/ vnd Riñen/ rc. Vom bösen Wetter vñ andern sorglichen | zufellen/ so den Berckheuern widerseht. Vom probieren/ vnd was sonst darzu von nöhten. | Wie man das Ertz bereiten/ klauben/ buchen/ rösten/ quätschen/ rädern/ wäschen/ im Rösten | brennen/ vnd allerley Ertz mit nutz schmelzen soll. Wie das Golt und Silber/ vnd das Silber | vom Golt/ Item das Kupffer vom Golt/ vnd das Bley vom Golt vom Golt und Silber/ zu scheyden | sey/ vnd wie die zwey köstlichen Metall mit nutz sollen gebrannt werden. Auch

wie das Silber | vom Kupffer und vom Eysen zu seyern sey. Letstlich von allerley harten Sässten/ die auß | wassern und flüssigen Säfften/ oder vermischten steinen/ gemacht | werden. Vnd wie endlich das Saltz zu sieden/ | vnd Glaß zu machen sey. | [ornament] | [in red:] Durch den Hochgelehrten und weitberühmpten Herrn Georgium Agri= | colam/ der Artzney/ Doctorn/ vnd Burgermeister der Churfürstlichen Statt Kemnitz/ erstlich | [in black:] mit grossem fleyß/ mühe vnd arbeit/ in Latein beschriben/ vnd in zwölf Bücher abgetheilt: Nachmals aber durch | den Achtbarn/ vnd auch Hochgelehrten Philippum Bechium/ Philosophen/ Artzt/ vnd in | der löblichen Vniuersitet zu Basel Professorn/ mit sonderm fleyß Teutscher | Nation zu gut verteutscht vnd an Tag geben. | [ornament] | Allen Berckherrn/ Gewercken/ Berckmeistern/ Geschwornen/ Schichtmei= | stern/ Steigern/ Berckheuern/ Wäschern/ vnd Schmelzern/ nicht allein nützlich vnd dienstlich/ sondern auch | zu wissen hochnotwendig. | [ornament] | [in red:] Mit Römischer Keys. May. Freyheit nicht nachzutruken. | [in black:] Getruckt in der Keyserlichen Reichenßstatt Franckfort am Mayn/ rc. | [in red, rule] | [in red:] Im Jar/ M. D. LXXX.

2^o: [8], I-CCCCXCI, [6] p. Title in red and black.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "Dem Ehrnvesten vnd Hochgelehr= | ten Herrn Joachim Strüppen der Artzney Doctorn ..."; I-CCCCXCI, Text of translation.; [1 pg], Blank.; [5 pgs], "An den günstigen Läser."; [1 pg], "Getruckt in der Keyserlichen | Reichstatt Frankfort am Mayn/ durch Peter | Schmidt ... Anno M.D.LXXX."

RARE. Second German edition, made up from the quires of the first German of 1557, with only the preliminaries and final leaves newly set. The text contains the same woodcuts of the previous editions (some recut), many of them full page, and a large printer's device.

REFERENCES: Agricola Bibliographie: 779. • BL: [no copy listed]. • Hoover Collection: no. 23. • Wellcome Catalog (Books): 1, no. 71.

61. 3rd edition, 1621: [In black:] Bergwerck Buch: | [in red:] Darinnen nicht allein alle Empter/ In= | strument/ Gezeug/ vnd alles/ so zu disem Handel gehörig/ mit Figu= | ren vorgebildet vnd klälich beschrieben: Sondern auch wie ein rechtverstädiger Berg= | [in black:] mann seyn soll/ vnd die Gäng außrichten seyen. Item/ von allerley Gängen/ Klüfften vnd absetzen deß | Gesteins. Von den Massen/ vom Marscheyden. Deßgleichen wie ein Gang zu hauwen/ wie alle Schächt zu | sencken vnd auffzurichten seyen. Von den Stollen/ Fellorten/ Radstuben/ vnnnd andern Gebäwen. Von al= | lerley Trögen/ Wassergehäsen/ Wasserkunst/ Pompen/ vnd Rinnen/ rc. Vom bösen Wetter vnd andern | sorglichen zufällen/ so den Berghäwern widerfahrt. | Vom probieren/ vnd was sonst darzu vonnöhten. | Wie man das Ertz bereiten/ klauben/ pauchen/ rösten/ quätschen/ rädern/ wä= | schen/ im Rösten brennen/ vnd allerley Ertz mit nutz | schmelzen soll/rc. | [in red:] Item/ wie das Gold vom Silber/ vnd das Silber vom Gold: Item | das Kupffer vom Gold/ vnd das Bley vom Gold vnd Silber zu scheiden sey/ vnd wie die | [in black:] zwey köstlichen Metall mit nutz sollen gebrannt werden. Auch wie das Silber vom Kupffer und vom | Eysen zu seyern sey. Letstlich von allerley harten Sässten/ die auß Wassern und flüssigen Säfften/ oder vermischten Steinen gemacht werden. Vnd wie endlich das | Saltz zu sieden/ vnd Glaß zu machen sey. | [in red:] Durch den Hochgelehrten und weiterberühmpten Herrn Georgium Agricolam/ der Artz= | ney Doctorn/ vnd Burgermeister der Churfürstlichen Statt Kemnitz/ erstlich mit grossem fleiß/ mühe vnd | [in black:] arbeit/ in Latein beschriben/ vnd in zwölf Bücher abgetheilt: Nachmals aber durch den Achtbarn/ vnd auch Hochgelehrten | Philippum Bechium/ Philosophen/ Artzt/ vnd in der löblichen Vniuersitet zu Basel Professorn/ mit sonderm | fleiß Teutscher Nation zu gut verteutscht vnd an Tag geben/ vnd nun zum andern | mal getruckt. |

AGUILERA

[in red:] Allen Bergherrn/ Gewercken/ Berckmeistern/ Geschwornen/ Schichtmei= | [in black:] stern/ Steigern/ Berckheuern/ Wäschern/ vnd Schmeltzern/ | nicht allein nützlich vnd dienstlich/ sondern auch zu | wissen hochnotwendig. | [vignette] | Getruckt zu Basel/ [in red:] in verlegung Ludwig Königs. | [rule] | [in black:] Im Jahr [in red:] M. DC. XXI.

2^o: [8], I-CCCCXXI (i.e., CCCXCI), [6] p. Title in red and black.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "Dem Ehrnvesten vnd Hochgelehr= | ten Herrn Joachim Strüppen der Artzney Doctorn ..."; I-CCCCXXI (i.e., CCCXCI), Text of translation.; [1 pg], Blank.; [5 pgs], "An den günstigen Läser."; [1 pg], "Getruckt in der Keyserlichen | Reichstatt Frankfort am Mayn/ durch Peter | Schmidt ... Anno M.D.LXXX."

RARE. The title differs slightly from the German, 1580 edition, otherwise this is an almost exact page for page reprint of the 1580 edition.

REFERENCES: Agricola Bibliographie: 787. • BL: [443.h.5]. • Hoover Collection: no. 24. • Roller & Goodman, *Catalogue*, 1976: 1, 16. • Wellcome Catalog (Books): 1, no. 72.



OPERA DI GIORGIO AGRICOLA, 1563

Italian edition

62. 1563: Opera Di Giorgio | Agricola De L'Arte De Metall | Partita In XII. Libri, Ne Qvali Si Descrivano Tvtt | le sorti, e qualità de gli uffizij, de gli strumenti, delle macchine, e di | turre l'altre cose attenenti a cotal arte, non pure con parole chiare, | ma eziandio si mettano a luoghi loro le figure di dette cose, ritrat- | te al naturale, con l'aggiunta de nomi di quelle, cotanto chiari, e | spediti, che meglio non si puo desiderare, o hauere. | Aggiugnesi il libro del medesimo autore, che tratta de gl' Animal | sottoterra, | da lui stoffo corretto, & riueduto. Tradotti in lingua Toscana da M. | Michelangelo Florio Fiorentino.

| Con l'Indice di tutte le cose piu notabili alla fine. | [Froben's printer device] | In Basilea, | Per Hieronimo Frobenio Et Ni- | colao Episcopo.

2^o: *4 a-z⁶ A-Y⁶ 2V⁶; 282^l; [8], 1-504 (i.e., 542), [8] p., 2 woodcut tables, 270 text woodcuts. Froben's printer device (title and last page) and ornamental initials. PAGE SIZE: 324 x 206 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 1/3 pgs], "Alla Serenissima ... Lisabeta ... Regina ..."; [2/3 + 1 pg], "Michel'angelo Florio Fiorentino."; [1 pg], Blank.; 1-511, Translations of Agricola's works on metals and mining.; 512, "Giorgio Agricola A Gior- | gio Fabricio."; 512-504 (i.e., 542), "Libro Di Giorgio | Agricola De Gl'Animali | di Sottta Terra..."; [5 pgs], "Indice Breve ... De l'Arte de Metalli."; [1 pg], "Indice Breve...de gl'Animali Sotteranei."; [1 pg], "In Basileae. | per Hieronimo Frobenio Et | Nicolao Episcopo | M. D. LXIII."; [1 pg], Froben's device.

RARE. Translation by Michelangelo Florio Fiorentino [see note below] of *De Re Metallica* (1st ed., Basiliæ, 1556). First Italian edition, using the same Hans Rudolf Deutsch woodcuts of Froben's Latin (1556, 1561) and German (1557) editions. The translator's dedication to England's Queen Elizabeth I (*2-*4) is usually not bound in. It appears that copies of this work sold in Italy had these leaves removed to avoid being censored as heretical. The relationship between the translator and the printer Froben is unknown.

Michelangelo Florio Fiorentino. (BORN: 1525; DIED: 1691) *Italian translator*. Fiorentino, an Italian Protestant who fled Italy for England, was the father of the Elizabethan writer John Florio [1553-1625], who produced the famous *World of Wordes*. He was patronized by Sir William Cecil and Cranmer, and produced several literary works.

REFERENCES: Agricola Bibliographie: 801-4. • BL: [33.g.16]. • Honeyman Sale: no. 34. • Hoover Collection: no. 27. • Roller & Goodman, *Catalogue*, 1976: 1, 15. • VD16: A-909. (Fiorentino) DNB. • Jöcher, *Gelehrten-Lexikon*, 1750-51.

Polish edition

63. Polish transl., 1903: Feliks Piestrak | [ornate rule] | Jerzego Agrikoli | „De Re Metallica” | [ornament] | Lwów. | Nakładem Towarzystwa Politechnicznego. | I. Związkowa Drukarnia We Lwowie, Ul. Lindego 4. | 1903.

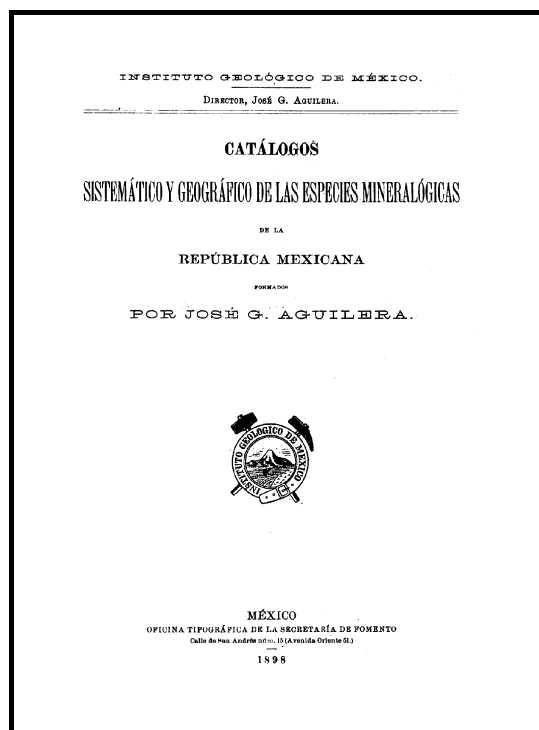
8^o: VERY SCARCE. Translated by Feliks Piestrak, this edition appeared in *Czasopismo Techniczne*, volume 21. REFERENCES: Agricola Bibliographie: 804.

AGUILERA, José Guadalupe. (BORN: Mapimí, Durango, Mexico, 1857; DIED: Mexico City, Mexico, 1941) *Mexican geologist*.

In 1876, Aguilera moved to Mexico City to obtain a degree in assaying from that city's school of mines. While there he became proficient in the chemical analysis of minerals and subsequently, he was appointed custodian of the mineral and geology collections. He actively collaborated in the Comisión Geográfica Exploradora (founded 1878) and participated in the geological explorations of the states of Oaxaca, Tlaxcala and Puebla. In 1884, the government sent him to the Smithsonian Institution in Washington for extended studies. Upon his return, he was appointed to many positions of leadership in the geological exploration of Mexico. In 1886, Aguilera participated in the creation of the Instituto Geológico Nacional; he was its director from 1895 to 1914. During his tenure, numerous publications describing the geology of Mexico were published under the oversight of the Instituto.

REFERENCES: ABE: III 8, 234-235. • Carreño, A.M., "Un insigne geólogo Mexicano," *Boletín de la Sociedad de Geología Mexicana*, 1938. • *Diccionario Porrúa*: 1, 67.

- Flores Reyes, Teodoro., "José Guadalupe Aguilera, In memoriam," *Boletín de la Sociedad Geológica Mexicana*, 17 (1954), no. 2, 10-15, 2 plates. • Ordóñez, E., "José G. Aguilera ...," *Boletín de la Sociedad de Geología Mexicana*, 1938. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 242. • WBI.



CATÁLOGOS SISTEMÁTICO, 1898

64. — Spanish, 1898.

Instituto Geológico De México. | [rule] | Director, José G. Aguilera. | [double rule] | Catálogos | Sistemático Y Geográfico De La Especies Mineralógicas | Del La | República Mexicana | Formados | Por José G. Aguilera. | [ornament] | México | Oficina Tipográfica De La Secretaría De Fomento | Calle de San Andrés núm. 15 (Avenida Oriente 51.) | [rule] | 1898.

8°: [1]-157, [1] p. PAGE SIZE: 315 x 215 mm.

CONTENTS: [1-2], Title page, verso blank.; 3, "I | Catálogo Sistemático De Especies Mineralógicas | De La República Mexicana." [4], Blank.; [5], "Prologo."—signed José G. Aguilera.; [6], Blank.; [7]-19, "Cuadro Sistemático | De Las | Especies Mineralógicas Mexicanas | Formado Según la clasificación del Professor J.D. Dana." [=overview of the mineralogical classification].; [20], Blank.; [21]-116, "Catálogo Sistemático De Las Especies Mineralógicas." [=list of mineral species and localities known in Mexico].; [117], "II | Catálogo Geográfico | De Las Especies Mineralógicas De México."; [118], Blank.; [119]-149, Text [=geographical list and mineral species that occur at the locality].; [150], Blank.; [151], "Abreviaturas."; [152], Blank.; [153]-157, "Índice Alfabético | De Las | Especies Contenidas En Este Catálogo."; [1 pg], Blank.

VERY SCARCE. Although dated, this work is perhaps the fullest treatment of the minerals of Mexico, giving a valuable catalog of the mineral species found in the country. It was printed as *Instituto Geológico Mexico, Boletín No. 11*. In it the minerals are arranged according to the classification system presented in Dana's *System of Mineralogy* (6th ed., New York, 1892), with individual localities within Mexico being given fully in connection with each species. The book begins with a prolog where the author explains that the large quantity of mineral species found in Mexico made the country an obvious candidate for a topographical mineralogy. An overview of the mineralogical system is then presented, followed by a list of mineral species known to occur in Mexico together with their localities. Another section reverses the order by first listing the geographical location together with the species known to occur there. The volume closes with a list of abbreviations and an index to the species mentioned in the catalog.

REFERENCES: *American Journal of Science*: 4th Series, 8 (1899), 236. • BL: [no copy listed]. • NUC: 5, 376 [NA 0101099].

AICHHORN, Sigmund Johann Nepomuk. (BORN: 1814; DIED: 1892) *Austrian mineralogist*.

REFERENCES: Sarjeant, *Geologists*, 1980: 2, 406.

65. — German, 1855.

Anleitung | zur | Flächenzeichnung | einfacher | Krystallgestalten | von | Dr. Sigmund Aichhorn, | Professor der Mineralogie, Geognosie und Paläontologie | am Steierm. Ständ. Joanneum &c. | [rule] | Mit drei Tafeln. | [ornate rule] | Wien. | Verlag und Druck von Carl Gerold et Sohn | 1855. 8°: xii, 56 p., 3 plates.

VERY SCARCE. A guide to the surface patterns of simple crystal forms.

REFERENCES: BL: [7105.c.27.(4.)]. • BMC: 1, 21. • NUC: 5, 550.

66. — German, 1855.

Das Mineralien-Kabinet am steiermärkisch — ständischen Joanneum zu Gratz. Mit besonderer Berücksichtigung der mineralogischen Schausammlung ... Gratz, 1855.

8°: viii, 142 p.

RARE. Description of the mineral collection at the state institution the Joanneum in Graz, Austria.

REFERENCES: BL: [7105.a.3.(1.)]. • BMC: 1, 21. • NUC: [no copy listed].

AIGNER, August.

67. — German, 1907.

Die | Mineralschätze | der | Steiermark | [rule] | Hand- und Nachschlagebuch | für Schürfer, | Bergbautreibende und Industrielle | von August Aigner, | K.K. Oberbergat I.P. | Mit einer Übersichtskarte über die Bergbaue Steiermarks. |

AIKIN

[ornate rule] | Wien-Leipzig, 1907. | Spielhagen & Schurich. | Verlagsbuchhandlung.

8°: π^4 1-19⁸ 192; 150 ℓ .; [i]-viii, [1]-291, [1] p., one folding map ("Bergbaue der Steiermark."—signed Karl Prochasta in Teschen). PAGE SIZE: 210 x 158 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Vorwort."—dated February 1906.; [v]-vii, "Inhaltsverzeichnis."; viii, "Druckfehler-Berichtigungen."; [1]-251, Text.; [252]-291, Literature.; [1 pg], Blank.

SCARCE. Provides a town by town run down of the mineral resources and mining activity in the region of Styria of Austria. The first section provides a brief geological overview, other sections cover the mining activity, analyses of various ores and minerals, and a bibliography of geological literature.

REFERENCES: BL: [no copy listed]. • Milojević, *Geoloska Bibliografija Jugoslavije*, 1952: 37. • NUC: 5, 566.



AIKIN

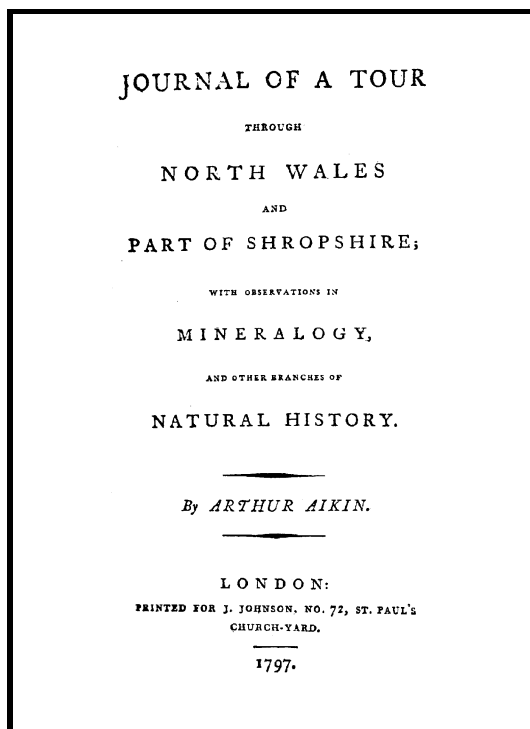
AIKIN, Arthur. (BORN: Warrington, Lancashire, England, 19 May 1773; DIED: London, England, 15 April 1854) *English chemist & mineralogist.*

Aikin originally trained to be a Unitarian minister; however, under the influence of the chemist Joseph Priestly [1733-1804], he was convinced to pursue a career in chemistry and mineralogy. Aikin edited from 1803 to 1808 the *Annual Review*. He was a founding member of the Geological Society of London, and for many years held the position of its secretary. He was also secretary of the Society for the Encouragement of Arts, Manufacturers and Commerce and the first treasurer and later president of the Chemical Society.

REFERENCES: *American Journal of Science*: 2nd Series, 20 (1855), 391-2. • Barr, *Index to Biographical Fragments*, 1973: 3. • BBA: I 11, 55-62; II 1242, 433-435. • Burgess, *Portraits of Doctors*, 1973: no. 26.1. • *Catalogue of Portraits of Naturalists*: 103 [2 portraits listed]. • Cleavelly, *World Palaeontological Collections*, 1983: 39. • DNB: 1, 118. • *ISIS*, 1913-65: 1, 19. • Kent, A., "Arthur Aikin (1773-1854) and other presidents (of the Chemical Society, London)," *Proceedings of the Chemical Society*, 1962, 133-4. • Lambrecht & Quenstedt, *Catalogus*, 1938: 5. • Lisney, *Bibliography of British Lepidoptera*, 1960. • Poggendorff: 1, col. 19. • *Proceedings of the Geological Society, London*: 1855, xli-xlii. • *Quarterly Journal of Geological Society of London*: 11, xli. • Sarjeant, *Geologists*, 1980: 2, 406-7. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 376. • Thomas, *Dictionary of Biography*, 1884: 69. • WBI. • Woodward, *History of the Geological Society*, 1907: 10. • *World Who's Who in Science*: 19.

68. — English, 1797.

Journal Of A Tour | Through | North Wales | And | Part Of Shropshire; | With Observations In



JOURNAL OF A TOUR, 1797

| Mineralogy | And Other Branches Of | Natural History. | [tapered rule] | By Arthur Aikin. | [tapered rule] | London: | Printed For J. Johnson, No. 72, St. Paul's | Church-Yard. | [rule] | 1797.

8°: A-Q⁸; 128 ℓ .; [i]-xvi, [1]-231, [9] p., one folding plate (unsigned, showing several cross sections). PAGE SIZE: 202 x 124 mm.

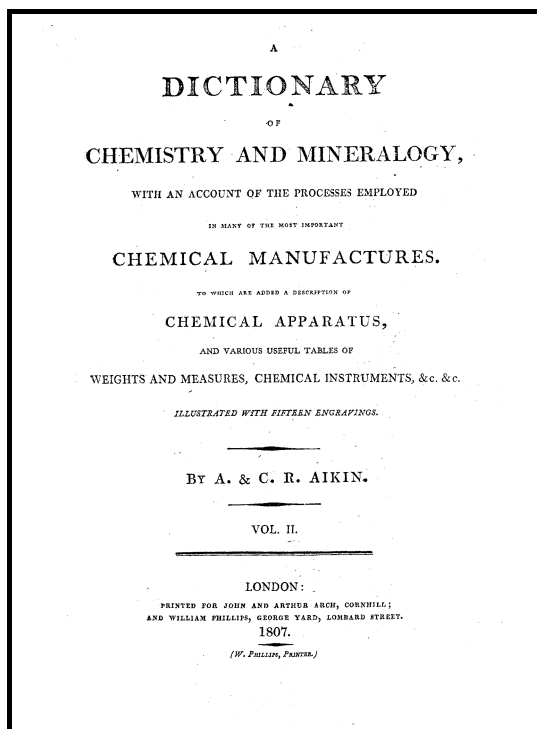
CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Charles Kinder and Charles Rochemont Aikin.; [iv]-xii, "Preface."; [xiii]-xvi, "Contents."; [one folding plate]; [1]-231, Text.; [1 pg], "Explanation of the plate."; [7 pgs], "Index."; [1 pg], Blank.

SCARCE. This is an account of an extensive tour made by Aikin throughout northern Wales in the summer of 1796. It was undertaken in part as a pleasant excursion and also partly to increase the author's mineralogical knowledge by examining the geological formations encountered along the way. A great number of mineralogical observations are included, but the volume is also gives vivid descriptions of the grandeur of the Welsh landscape, written in Aikin's familiar style. The text is divided into nineteen chapters, each describing observations made on a relatively short journey from one town to another.

REFERENCES: BL: [982.a.9.]. • BMC: 1, 21. • LKG: XIV 442. • NUC: 5, 603-4.

69. — English, 1807-14.

A | Dictionary | of | Chemistry and Mineralogy, | with an Account of the Processes Employed | in Many of the Most Important | Chemical



DICTIONARY, 1807

Manufactures. | To which are added a description of | Chemical Apparatus, | and various useful tables of | Weights and Measures, Chemical Instruments, &c.&c. | Illustrated with fifteen engravings. | [tapered rule] | By A. & C.R. Aikin. | [tapered rule] | Vol. I. [-II.] | [double rule] | London: | Printed for John and Arthur Arch, Cornhill; | and William Phillips, George Yard, Lombard Street. | 1807 [-1814]. | [tapered rule] | (W. Phillips, Printer.)

2 vols. [VOL 1: 1807] 4°: π^4 A-Z⁴ 2A-2Z⁴ 3A-3Z⁴ 4A-4H⁴ I¹; 318 ℓ .; [i]-vii, [1] errata, [1]-628 p., frontispiece plate, "Arrangement of the Furnaces in Mr. Pepys's Laboratory."; [VOL 2: 1814] 4°: π^2 A-Z⁴ 2A-2Z⁴ 3A-3Z⁴ 4A-4C⁴ 4D² χ^8 ; 300 ℓ .; [4], [1]-580, [1]-15, [1] p., 15 engraved plates. PAGE SIZE: 263 x 193 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii], Dedication to Charles Hatchett.; [iv], Blank.; [v]-vii, "Preface"; [1 pg], "Errata in Vol. I."; [1]-628, Alphabetical arrangement of subjects A to I.

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], "Errata in Vol. II."; [1 pg], Blank.; [1]-508, Continuation of the alphabetical arrangement of subjects J to Z.; [509]-511, "Addenda."; [512], Blank.; [513]-544, "Appendix, No. 1. Description of the Chemical Apparatus most frequently used for general purposes, with reference to the plates."; [545], "Appendix, No. II. Containing Tables of Weights and Measures — English and Foreign; of Chemical Instruments; of the Composition of Acids and Salts; and of Chemical Affinities."; [546], "Contents of Appendix II."; [547]-574, "Appendix, No. II."; 575-578, "Explanation of the Plates."; [579]-580, "Index."; [1]-15, "A Catalogue of Optical, Mathematical and Philosophical Instruments made and

sold by W. and S. Jones [No. 30.] Lower Holborn, London."; [1 pg], "By the Late G. Adams, now sold by W. and S. Jones."

PLATES: The frontispiece to volume one is "An Arrangement of furnaces in Mr. Pepy's Laboratory," signed E. Aikin del. Lowry sculpt. At the end of volume two there are fifteen engraved plates. Plates 10 and 11 are signed, E. Aikin del. Lowry sculpt., and plates 13 through 15 are signed, J. Simpkins, sc. Plates 1–12 show various chemical apparatus and furnaces, while plates 13–15 show various crystal drawings.

SCARCE. Co-authored with Charles Rochemont Aikin [see note below]. "The intention has been to give a faithful and sufficiently detailed description of all the important facts hitherto discovered in the sciences of Chemistry and Mineralogy, enlarging more particularly on those parts which are of peculiar interest to the Manufacturer and to the Practical Chemist." (Preface).

This work was written as a practical tool to guide the manufacturer and chemist, having been inspired by the *Chimie Appliquée aux Arts* of the French industrial chemist, Jean-Antoine Chaptal [1756-1832]. Therefore, almost all information regarding historical perspectives and theoretical matters, including medicine, magnetism, galvanism, etc., has been omitted. Descriptions of the procedures are always guided by what is known to work, with only slight speculation on the reason why. For many years during the industrial period, this was the premier dictionary in English on the described subjects. An appendix was also published [which see next entry].

Charles Rochemont Aikin. (BORN: Warrington, Lancashire, England, 1775; DIED: London, England, 20 March 1847) *English physician & chemist*. Charles was the brother of Arthur Aikin. He was a member of the Royal College of Physicians and secretary of the London Medical and Chirurgical Society.

REFERENCES: BL: [8906.ee.9.]. • BMC: 1, 21. • Bolton, *Bibliography of Chemistry*, 1893: no. 38. • Brock, *History of Chemistry*, 1993: p. 273. • Cole, *Chemical Literature*, 1988: no. 16. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 8. • Freilich Sale Catalog: no. 16. • NUC: 5, 603-4 [NA 0108646]. • Roller & Goodman, *Catalogue*, 1976: 1, 18. • Ward & Carozzi, *Geology Emerging*, 1984: no. 35. (Aikin) BBA. • DNB: 1, 118. • *World Who's Who in Science*: 19-20.

70. Appendix, 1814: An Account | of the Most Important | Recent Discoveries and Improvements | in | Chemistry and Mineralogy, | to the present time; | being an | Appendix | to their | Dictionary of Chemistry and Mineralogy, | [rule] | By A. & C.R. Aikin. | [rule] | London: | Printed for John and Arthur Arch, Cornhill; | and William Phillips, George Yard, Lombard Street. | 1814. | [rule] | (W. Phillips, Printer.)

4°: π^2 A-P⁴ χ^1 Q-U⁴ (U2 signed U3); 91 ℓ .; [4], [1]-119, [2], 120-176 p., engraved frontispiece (unsigned showing apparatus). PAGE SIZE: 264 x 194 mm.

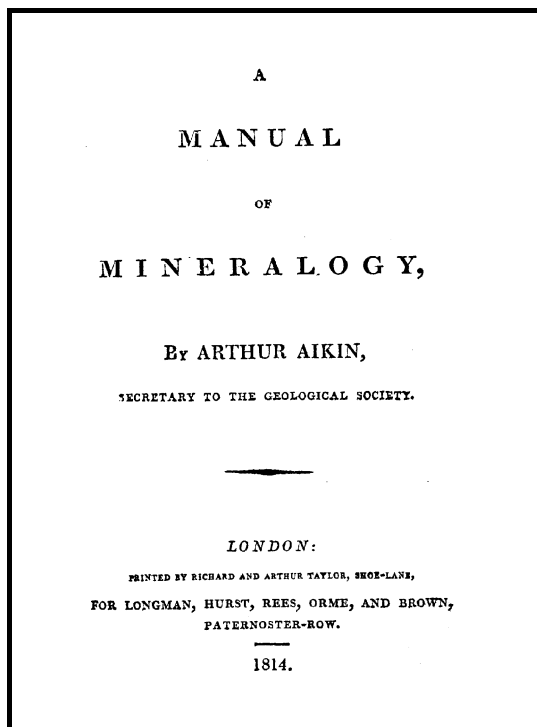
CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Note about the work.; [1 pg], Blank.; [1]-119, Text, with imprint on page 119, "London: Printed by William Phillips, | George Yard, Lombard Street."; [1 pg], Blank.; [1 pg], "Appendix to Vol. II."; 120-176, Text, with imprint on page 176, "London: | Printed by W. Phillips, George Yard, Lombard Street."

SCARCE. Separately printed appendix of *A Dictionary of Chemistry and Mineralogy* (2 vols., London, 1807-14) [which see previous entry]. Sometimes this appendix is found bound separately as described here, and in other instances is bound into the two volumes of the *Dictionary*.

REFERENCES: BL: [45.h.1.]. • Cole, *Chemical Litera-*

AIKIN

ture, 1988: no. 16. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 8 [appendix divided between the two volumes.].
• NUC: 5, 603-4 [NA 0108646].



MANUAL OF MINERALOGY, 1814

71. — English, 1814 [First edition].

A | Manual | of | Mineralogy, | By Arthur Aikin, | Secretary to the Geological Society. | [tapered rule] | London: | Printed by Richard and Arthur Taylor, Shoe-Lane, | for Longman, Hurst, Rees, Orme, and Brown, | Paternoster-Row. | [rule] | 1814.

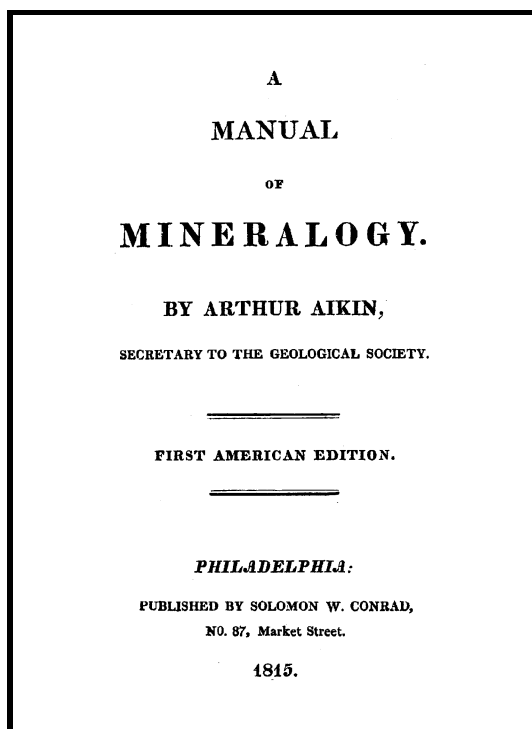
8°: π^8 b-d⁸ B-L⁸ M²; 114ℓ.; [i]-lx, [1]-164 p. PAGE SIZE: 184 x 115 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Advertisement."—dated June 10, 1814.; [iv], Blank.; [v]-lvii, "Introduction."; [lviii], Blank.; [lix]-lx, "General Synopsis."; [1]-7, "Class I. Non-Metallic Combustible Minerals."; [8], Blank.; [9]-72, "Class II. Native Metals and Metalliferous Minerals."; [73]-150, "Class III. Earthy Minerals."; [151]-154, "Class IV. Saline Minerals." [155]-164, "Index."

SCARCE. This work was based upon lectures Aikin delivered during the winter of 1814 before members of the Geological Society of London. It is written in a clear, lucid manner so that even a beginner could gain insight to the science. The introduction provides preliminary information about the science of mineralogy, including definitions and reasons why the science should be studied. An outline of the classification system proposed by the author is provided. This is followed by the descriptive

mineralogy, which takes up the remainder of the work. The work deals principally with the procedures used to identify mineral substances. The author describes the properties that are peculiar to each mineral and how they might be used to distinguish between similar species. Aikin was one of the most accomplished mineralogists of his time, and the easy narrative he adopts throughout this work undoubtedly helped popularize mineralogical studies.

REFERENCES: BL: [953.a.7.]. • BMC: 1, 21. • Dana's 7th (Bibliography): 65. • NUC: 5, 603-4. • Roller & Goodman, *Catalogue*, 1976: 1, 18.



MANUAL OF MINERALOGY, 1815

72. American issue, 1815: A | Manual | of | Mineralogy. | By Arthur Aikin, | Secretary to the Geological Society. | [double rule] | First American edition. | [double rule] | Philadelphia: | Published by Solomon W. Conrad, | No. 87, Market Street. | 1815.

8°: [A]-Z⁶; 138ℓ.; [i]-viii, [9]-275, [1] p. PAGE SIZE: 177 x 103 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Advertisement."; [iv], Blank.; [v]-viii, "Preface to the Second Edition."—dated January 10, 1815.; [9]-68, "Introduction."; [69]-70, "General Synopsis."; [71]-89, "Class I. Non-Metallic Combustible Minerals."; [90]-158, "Class II. Native Metals and Metalliferous Minerals."; [159]-258, "Class III. Earthy Minerals."; [259]-264, "Class IV. Saline Minerals."; [265]-275, "Index."; [1 pg], "S.W. Conrad has lately published ..."

SCARCE. American issue, after the second London edition of 1815. This work was published as a textbook to be used in American schools and by individuals interested in minerals but who did not have the advantage of an instructor.

REFERENCES: BL: [no copy listed]. • *Freilich Sale Catalog*: no. 17. • Hazen & Hazen, *American Geological Literature*, 1980: no. 101. • *North American Review*: 5 (1817), 74-81. • Rink, *Technical Americana*, 1981: no. 774. • Shaw & Shoemaker, *American Bibliography*, 1958-83: no. 33808.

73. 2nd edition, 1815: A | Manual | of | Mineralogy, | By Arthur Aikin, | Secretary to the Geological Society. | [tapered rule] | Second edition, | with Additions and Corrections. | [tapered rule] | London: | Printed by Richard and Arthur Taylor, Shoe-Lane | for Longman, Hurst, Rees, Orme and Brown, | Paternoster-Row. | [rule] | 1815.

8°: π^4 B-R⁸ S4; 136 ℓ .; [i]-viii, [1]-263, [1] p. PAGE SIZE: 176 x 104 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Advertisement."—dated 10 June 1814.; [iv], Blank.; [v]-viii, "Preface | To | The Second Edition.;" [1]-252, Text.; [253]-263, "Index."—page 263, "Printed by R. and A. Taylor, Shoe Lane, London.;" [1 pg], Blank.

SCARCE. This edition is in the same format as the previous. The introduction has received only minor corrections. The majority of additions and augmentations have occurred in the descriptive mineralogy.

REFERENCES: BL: [953.a.8.]. • BMC: 1, 21. • Dana's 7th (Bibliography): 65. • NUC: 5, 603-4.

74. — English, 1814.

Proposals for a mineralogical survey of the county of Salop, and some adjacent districts. [London, 1814.]

4°: 3, 3 p., one colored map. RARE.

REFERENCES: BL: [G.2054.]. • BMC: 1, 21. • NUC: [no copy listed].

ALBERTUS DE SAXONIA. (BORN: Saxony, Germany, c1330; DIED: c1390) *German theologian, philosopher & naturalist.*

Albertus was the son of a Saxon framer. He graduated from the University of Paris and was appointed the first Rector of the University of Vienna in 1365. Then from 1366 to 1390 he was Bishop of Halberstadt in Germany. As a logician, he was at the forefront of the movement that expanded the analysis of language based on the properties of terms, especially their reference (in Latin: *suppositio*), but also in the exploration of new fields of logic, especially the theory of consequences. As a natural philosopher, he contributed to the spread of Parisian natural philosophy throughout Italy and central Europe. Because of the authority of his name, the *pseudo*-Albertus Magnus work, *Liber aggregationis* or *Secreta de herbis, lapidibus et mineralibus* was sometimes issued under his name.

REFERENCES: ADB. • *Catholic Encyclopaedia*. • DBA: I 11, 206-211; II 16, 124, 124a, 125a-128. • Ferchl. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • NDB. • *Österreich Biographisches Lexikon*. • Poggendorff: 1, col. 24. • Stange, E., ed., *Arnoldus Saxo, De finibus [floribus] rerum naturalium (um 1225) Die Enzyklopädie*. Herausgegeben von Emil Stange. *Beilage zum Jahresbericht des Königlichen Gymnasiums zu Erfurt*. Erfurt, 1905-07. • Stange, E., *Arnoldus Saxo, der älteste encyklopädist des dreizehnten Jahrhunderts*. Halle, 1885. 66 p. [Inaugural-dissertation.]. • WBI. • *World Who's Who in Science*: p. 24. • Worstbrock, F.J., "Arnoldus Saxo," in *Verfasserlexikon*, 1, 485ff.

75. — German, 1885 [Dissertation].

Arnoldus Saxo, der älteste Encyklopädist des dreizehnten Jahrhunderts von Emil Stange. Halle, Druck von T.G. Cramer, 1885.

4°: 66 p.

VERY SCARCE. Inaugural-dissertation by Emil Stange [1864-] describing Arnoldus Saxo's 13th century *Encyclopaedia*.

REFERENCES: NUC.

76. — German, 1905-7.

Die Encyklopädie des Arnoldus Saxo, zum ersten Mal nach einem Erfurter Codex herausgegeben von ... Emil Stange ... Erfurt, 1905-7.

3 parts. All the parts appeared as volumes of the *Beilage to Jahresbericht of the Königliches Gymnasium in Erfurt*. "1905. Progr. Nr. 278," "1906. Progr. No. 289" and "1907. Progr. Nr. 289."

RARE. Edited by Emil Stange [1864-], this is the only translation into a modern language of Arnoldus Saxo's major work, which is recognized as one of the first encyclopedias of the 13th century. Arnold was probably a doctor and teacher, who may well have known ALBERTUS MAGNUS. He was a privileged witness to the transmission of the Greek-Arabic texts as they spread through Europe after the Dark Ages. In particular the works of Aristotle captured his attention. Writing between 1220 and 1230, he authored a compilation of knowledge that he titled, *De finibus rerum naturalium*. Basing his text on the Latin translations of Greek and Arabic writings, he divided the material into five books: I. De coelo et mundo. II. De naturis animalium. III. De gemmarum virtutibus. IV. De virtute universali. V. De moralibus. The third part, or lapidary, was especially popular during the Middle Ages. In it he quotes Aristotle, Dioscorides, and "Aaron and Evax" (i.e., Marbode). It was used by Thomas of Cantimpré, Bartholomaeus Anglicus, Albertus Magnus, Vincent, of Beauvais, when writing their own works, but was not quoted except by the last named and by the anonymous author of the *Hortus Sanitatis*. It was also early on anonymously translated into Hebrew as, *Sefer Ha-Abanim*.

REFERENCES: NUC. • Thorndike, *History of Magic*, 1923-58: ??, ??.

ALBERTUS MAGNUS. (BORN: Lauingen, Swabia, Germany, 1193; DIED: Cologne, Germany, 15 November 1280) *German naturalist & theologian.*

Albertus was one of the most famous authors of the High Middle Ages. He was born to a wealthy and powerful family, which provided him with a good Classical education. He studied liberal arts at Padua, where he came under the influence of Joranus of Saxony [?-1236], Master General of the Dominican Order. Against his family wishes, Albert vowed to a life of poverty and entered the Order, eventually being ordained a priest. Around 1241, he was sent to the University of Paris where he quickly rose to the post of Master of Theology. His devotion and knowledge soon lead to his appointment to establish in Cologne a *studium generale*. This education center was to occupy and consume Albertus for the remainder of his life; among his illustrious students were Thomas Aquinas [1227-1274], Thomas of Cantimpré [1201-after 1280] and Ulrich of Strassburg and Giles [?-1278]. In 1260 the Pope appointed Albertus Bishop of Regensburg, a post he resigned in 1262. The remainder of his long life was devoted to preaching, teaching and writing, primarily at Cologne. He was the most influential medieval educator of the Aristotelian philosophies, and through his position as provost at Cologne, he introduced

ALBERTUS MAGNUS



ALBERTUS MAGNUS

Greek teachings to the curriculum—a practice soon copied at other education centers. Albertus Magnus was canonized in 1931 by Pope Pius XI, who declared him Saint to all those who cultivate the natural sciences.

REFERENCES: ADB: 1, 186-96. • Barr, *Index to Biographical Fragments*, 1973: 3. • *Catalogue of Portraits of Naturalists*: 105 [8 portraits listed]. • Damon, S.F., "A portrait of Albertus Magnus," *Speculum*, 5 (1930), 102, portrait. • DBA: I 12, 363-398; II 17, 110-248. • Doerfler, P., *Albertus Magnus*. Munich, 1940. • DSB: 1, 99-103 [by W.A. Wallace]. • *Encyclopaedia Britannica*, 11th edition. • Ennen, L., *Albertus Magnus, ein Lebensbild aus dem Mittelalter*. Köln, L. Schwann, 1856. • *ISIS*, 1913-65: 1, 22-4. • Lambrecht & Quenstedt, *Catalogus*, 1938: 5-6. • *Lexicon des Mittel Alters*, 1977-99. 9 vols. • Mathar, L., *Albert der Deutsche*. München, Gladbach, 1940. • NDB: 1, 144-8 [by M. Grabmann]. • Poggendorff: 1, col. 24. • *Popular Science Monthly*: 71 (1907), 87. • Sarjeant, *Geologists*, 1980: 2, 408-9, Suppl. 1 (1986), 1, 243-4, & Suppl. 2 (1995), 1, 378-9. • Sartori, *Introduction*, 1928-52: 2, 934-44. • Schaedler, *Biographisch Handwörterbuch*, 1891: 2. • Scheeben, H.C., *Albertus der Grosse. Zur Chronologie seines Lebens*. Vechta, Germany, 1931. • Sighart, J., *Albertus Magnus in Geschichte und Sage*. Köln, Georg Joseph Manz, 1880. [i]-xvi, [1]-386 p., frontispiece (portrait), plates. • Sighart, J., *Albertus Magnus. Sein Leben und seine Wissenschaft*. Regensburg, Georg Joseph Manz, 1857. [i]-xvi, [1]-386, [2] p., frontispiece, 2 color plates. • WBI. • Wilms, P.H., *Albert der Grosse*. Munich, Kösel & Pustet, 1930. 237 p., one plate. • Winterswyl, L., *Albert der Deutsche. Das Leben und Wirken des Albertus Magnus*. Potsdam, Germany, 1936. • *World Who's Who in Science*: 24. • Wyckoff, *Book of Minerals*, 1967.

De Mineralibus

77. — Latin, 1476 [First edition].

De Mineralibus Libri. [COLOPHON: Patavii, Petrus Maufer for Antonius de Albricis, 20 September 1476].

2^o: [18 26 36 48] (unsigned); 28ℓ.; no pagination, foliation or signatures. Two columns, Gothic type, 63 lines.

CONTENTS: 1/1r (=1r), "Alberti magni philosophorum maximi de mineralibus liber primus incipit. Tractatus pri-



DE MINERALIBUS LIBRI, 1476

mus de lapidibus in comuni. Capitulum pri- mum de quo est intentio. et quod diuisio modus et dicendum ordo. [D9] je com | mixti | one et | coagulatione | similitur et coagulatione et li | quefactione et | ceteris huius | modi passioi | bus in libro meteororum iam dictus est. ...; 2/1r (=9r), "et virtutes eorum eomodo quo mos est medi | cis..."; 4/8v (=28v), COLOPHON: "finis. | Alberti magni libris quinq; mineralium deo | duce finis impositus est. Nobilis et egregii vi | ri Antonii de albricis Bargomensis artium | et medicine doctoris clarissimi impensa. Qui | ut correctiores redderetur famosissimus arti- | um et medicine doctor dominus Nicoletus de | pigaciis in preclarissimo gimnasio patauino | ordinariam philosophie legens accuratissime | reuissit. Per me petrum maufer normanz Rothoma | gensium ciuem. die 20 septembris 1476. | DEO GRATIAS AMEN."; 4/8v (=28v), line 58: "Capitulum nonuz de natura et proprietatibus electri. | finis. coronat."

EDITIO PRINCEPS. Extremely rare. Albertus Magnus set as his life's work to place all of Aristotle's extant writings into a coherent system and to reconcile the Greek philosophies with those of the Christian world. To attain this outcome, he scoured the libraries of every monastery he visited for any writings of the Ancients. In this quest he was rewarded with the discovery of several ancient works thought lost. These he had copied under his own eyes, thus preserving them for the future when they might not otherwise have survived. However, Albert's diligence did not locate any copy of what he thought was Aristotle's *Lapidary*, and what is now known to be a pseudo-Aristotelian work. He was therefore forced to write his own work dealing with minerals. The result is of remarkable interest as it shows not only what the state of mineralogy was in

the 13th century, but what Albert thought the science should be.

The *De Mineralibus* [=Book of Minerals] is an reflection of the knowledge of minerals in the 13th century structured in the framework of ancient Greek doctrine. Following basic Aristotelian philosophy and guided only by the few lines devoted to mineral substances in Aristotle's *Meteorologica*, Albertus draws heavily upon his own observations and less so on other medieval and classical sources to describe minerals. Various duties of his religious Order caused him to take frequent trips throughout the territories of France, Germany and Italy. Along the literally thousands of miles traveled on foot by Albertus, he had many encounters with mines, miners and minerals. These impressions he retained in his memory until they were later recorded in this work. Consequently, when reading Albertus' words, there is no doubt as to the authority of his citations. One can only regret that the scope of the project was so great as to preclude observations of many phenomena.

The *De Mineralibus* is divided into five books, dealing with stones (Books I-II), metals (Books III-IV), "intermediates" (Book V), which are neither stones nor metals, but have characteristics of both. In books, I, III and V the author follows classical philosophy by discussing minerals based upon their causes. This refers to the four causes distinguished by Aristotle as material (the matter from which minerals are made), efficient (the process by which minerals are made), formal (the form which minerals take, assumed by Albertus to be based on biological propagation), and final (the reason the mineral exists). In books, II, IV and V Albertus completes his plan by individually naming stones, metals, and "intermediates," and describing each in considerable detail. This type of catalog, alphabetically arranged on the name of the stone was popular in medieval herbals and lapidaries and is a tradition that dates back at least to Pliny. Yet Albertus' *De Mineralibus* is not a simple lapidary. Even though its background is based in medieval thought, with many errors, the structure of the text is recognizable in modern textbooks (i.e., the introduction of general principles giving the origin, and physical properties of minerals, followed by descriptions of individual minerals including appearance, place of occurrence, uses, etc.). With Albertus Magnus' mineralogy, the study of minerals begins to emerge from its embryonic period into a full fledged science. The tradition of magical and curative powers in gems still permeates the text, but one feels the author fighting the superstitions of the ancient beliefs, and seeing the world in a new, more skeptical and practical view.

English translation, 1967: Albertus Magnus | Book of | Minerals | Translated by | Dorothy Wyckoff | Professor of Geology, Bryn Mawr College | Clarendon Press | Oxford | 1967. 8°: [A]-Y⁸; 176^l.; [i]-xlii, [1]-309, [1] p., 2 plates.

[i-ii], Half title page, verso "Oxford University Press, Ely House, London ..."; [iii-iv], Title page, verso copyright notice.; [v], Dedication to D.M.T.; [vi], Blank.; [vii], "Preface."; [viii], Blank.; [ix], "Contents."; [x], Blank.; [xi],

"Illustrations."; [xii], Blank.; [xiii]-xlii, "Introduction."; [1], "Book of Minerals."; [2], Blank.; 3-7, Contents of the book of minerals.; [8], Blank.; [9]-53, "Book I. Minerals."; [54], Blank.; [55]-151, "Book II. Precious Stones."; [152], Blank.; [153]-201, "Book III. Metals in General."; [202], Blank.; [203]-236, "Book IV. The Metals Individually."; [237]-251, "Book V. Minerals that seem to be Intermediate Between Stones and Metals."; [252], Blank.; [253]-263, "Appendix A. Aristotle."; [264]-271, "Appendix B. Lapidaries."; [272]-278, "Appendix C. Astrology and Magic."; [279]-285, "Appendix D. Alchemy."; [286]-292, "Appendix E. Identification of Minerals and Rocks."; [293]-301, "Bibliography."; [302], Blank.; 303-309, "Index."; [1 pg], Blank.

English translation by Dorothy Wyckoff [see note below] from *De Mineralibus* (Parisii, 1890).

German translation, 1983: *De Mineralibus*. Basel, Braun, Geschichte für Präventivmedizin, 1983. 68 p. Published as: *Texte zur Geschichte der Präventivmedizin*, no. 2. [ISBN 3-7643-1528-8.]

French translation, 1995: Saint Albert le Grand; Le monde minéral; Les pierres; De mineralibus (livres I et II); présentation, traduction et commentaires par Michel Angel. Paris, Les Editions du Cerf, collection sagesse chrétienne, 1995. 443 p. [ISBN 2-204-05244-2].

Michel Angel gives in this modern work the first translation in French of *De Mineralibus*.

Dorothy Wyckoff. (BORN: Topsfield, Massachusetts, U.S.A., 22 July 1900; DIED: Bryn Mawr, Delaware, Pennsylvania, U.S.A., July 1982) *American geologist*. Wyckoff graduated from Bryn Mawr College in 1921. A Workman fellow from 1928-9, she received her Ph.D. in 1932. She stayed at the College, being a demonstrator, 1925-32, instructor 1932-4, professor of geology, 1934-66, when she retired.

REFERENCES: Adams, *Birth and Development*, 1938: 114-5. • BL: [no copy listed]. • CBN: 1, 496. • Dana's 7th (Bibliography): 65. • DSB: 1, 99-103 [by W.A. Wallace]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 15-7. • GW: 686. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 522*. • NUC: 7, 276-89 [NA 0140878]. • Paneth, F., "Ueber eine alchemistische Handschriften des 14. Jahrhunderts und ihr Verhältnis zu Albertus Magnus' Buch 'De Mineralibus,'" *Archiv für Geschichte der Mathematik der Naturwissenschaften und der Technik*, 12 (1929), 35-45 & 13 (1930) 408-13. • Thorndike, *History of Magic*, 1923-58: 2, 545-6. • Wallerius, *Brevis Introductio*, 1779. (Wyckoff) American Men of Science, 6th edition (1938): p. 1583. • Internet search. • SSDI.

78. 2nd edition, 1491: Mineralium Libri. [COLOPHON, Papiae, Christophorus de Canibus, 18 June 1491].

2°: a⁸ b-c⁶ d⁸; 28^l.; no pagination or foliation. Two columns, Gothic type, 59 lines. VERY RARE.

CONTENTS: a1r (=1r), "Alberti magni philoxophorū maximi de mi | neralibus liber primus icipit. Tractatus pri | mus de lapidibus in cōmuni. Capitulu⁹ pri | mum de quo ē intentio . ⁊ que diuisio modus | ⁊ dicendorum ordo. | [D10]E cōmixtione | ⁊ coagulatōe simi | liter ⁊ ???gelatōe ⁊ | liquefactione ⁊ ce | teris buiusmodi | passionib⁹ in libro | metheororum iā | dictu⁹ est. ..."; b1r (=9r), "⁊ virtutes eorum eo mō quo mos ē medicis | describere ..."; d8v (=28v), col. 2, line 31, COLOPHON: "... Exdictis enim omnino | quecūq; hic non nominata sunt de facili pote | runt cognosci. | Explicit op⁹ Alberti magni in libris quinz | mineraliū. | Laus Deo | Impressum Papie per Christophorum de | canibus sub āno domini .149i. die i8. Iunii. LIBer mineralium alberti magni | ..."; d8v (=28v), col. 2, line 60: "Finis."

REFERENCES: CBN: 1, 496. • GW: 687. • Hain, *Repertorium Bibliographicum*, 1826-38: 521*. • NUC: 7, 276-89 [NA 0140878]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 337. • Voulliéme (Berlin): no. 3266.

79. 3rd edition, 1495: *De Mineralibus*. [COLOPHON, Impressum Venetijs per Ioannem & Gregoriū de Gregorijs fratres.

ALBERTUS MAGNUS

Anno dñi. M.cccclxxxv. die. xxij. Iunij. (=22 June 1495)].

2°: aa-cc⁶ dd⁴; 22ℓ.; no pagination or foliation. Two columns, Gothic type, 65 lines. VERY RARE.

CONTENTS: aa1r, "Alberti magni philosophoꝝ maximi de mine | ralibus liber primus incipit. | Tractatus primus de lapidibus in cōi. | Capituluꝝ primuꝝ de quo est intentio ꝛ que diui | sio modus ꝛ dicendoruꝝ ordo. | [D13]E cōmixtiōe ꝛ coa- | gulatiōe sil'iter ꝛ cō- | gelatione ꝛ liquefa | factiōe ꝛ ceteris hu | iusmodi passionib⁹ | in libro metheoroꝝ | iam dictuꝝ est. ..."; bb1r (=7r), "materiam complexionatam cui infunditur. Si ergo | ..."; dd3v (=21v), line 43: "... Ex dictis enim oīno quecūqꝫ hic non noīa- | ta sunt de facili poterunt cognosci. | Finis | Impressum Venetijs per Ioannem ꝛ Gregoriuꝝ de Gregorijs fratres . Anno dñi .M.cccc.lxxxv. | die .xxij. Iunij."; dd4r (=22r): "Liber mineraliū Alberti Magni libros quinqꝫ | continet partiales. | ..."; dd4v (=22v), line 15: "Finis" under which is the printer's mark.

REFERENCES: BL: [IB.21084.]. • BMC XV: 5, 346 [IB 21084]. • BSB-Ink: no. A151. • Freilich Sale Catalog: no. 18. • Goff: A-281. • GW: no. 688. • Hain, *Repertorium Bibliographicum*, 1826-38: H 522*. • Hoover Collection: no. 38. • Klebs, *Incunabula Scientifica*, 1938: no. 21.3. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 228. • NUC: 7, 276-89 [NA 0140879]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 338. • Proctor, *Index*, 1898-1906: no. 4543. • Voulliéme (Berlin): no. 3884.

80. 4th edition, 1499: Liber Mineraliū Uene | rabil' Alberti magni Ratisponensis Episcopi trac | tans de materia . accidentibus . causis . locis . vir | tutibus . de ymagibus [!] et sigillis lapiduꝝ deqꝫ | metalloꝝ causis accidētalibus [!] scilicet cōgelati= | one . liquefactiōe . ductibilitate . cremabilitate . sapore . colore et odore eorundem deniqꝫ de cau | sis et principijs effentialibus cuiuslicet metalli | in speciali eleanor enarrans | ...

8°: π⁴ [a]-c⁸ d⁴ e⁴ f-h⁸ i⁴ k⁴ l-p⁸ q⁴; 112ℓ.; no pagination or foliation. Gothic type, 27 lines.

CONTENTS: π2r (=2r): "¶ Incipit tabula libri mineralium Alberti | magni ordinē libroꝝ ꝛ quotā folioꝝ ostēdens..."; a1r (=5r): "Liber mineraliū | Principis philosophorum Domini | Alberti mgani [!] Ratisponensis Ec= | clesie Episcopi | ..."; a1v (=5v), Blank.; a2r (=6r), "Foliū ij. ¶ Alberti magni philosophoꝝ maximi de | mineralibus liber primus incipit. Tractatus | primus de lapidibus in cōmuni. Capitulum | primū de quo est intētio . ꝛ que diuisio . modus | et dicendoꝝ ordo | [6]E cōmixtiōe ꝛ coagulatiōe | sil'r ꝛ cōgelatiōe ꝛ liqfactiōe ꝛ | ceteris huiusmodi passionib⁹ | in libro metheorum iam di | ctum est. ..."; q3v (=111v), line 12: "... Ex dict⁷ em omnino | quecunqꝫ hic non nominata sunt de facili pote | runt cognosci. [E]xplicit opus Alberti magni | in libris quinqꝫ mineralium | ..."; q4 (=112), Blank.

VERY RARE. Printed at Köln by Kornelius von Zierikzee, not before 1499.

REFERENCES: GW: 689. • Hain, *Repertorium Bibliographicum*, 1826-38: 521*. • Klebs, *Incunabula Scientifica*, 1938: 21.4. • Wellcome Catalog (Books): 1, no. 130.

81. 5th edition, 1517-8: Diui Alberti Magni | Sūmi in via peripathetica philosophi: Theolo- | giqꝫ profundissimi naturalia ac supranaturalia | opera per Marcū Antoniuꝝ Zimarā philo- | sophuꝝ excellētissimū nuper castigata erroribusqꝫ | purgata: necnō cuꝫ marginib⁹ optimis anno= | tatiōib⁹ ornatis doctrinaqꝫ excultis atqꝫ fideli= | ter ipressis feliciter incipiunt. Que sunt hec. vz. | De Physico auditu Lib. VIII. | De Celo & mundo Lib. IIII. | De Generatiōe & corrup. Lib. II. | De Methauris Lib. IIII. | De Mineralibus Lib. IIII. | De Anima Lib. III. | De Intellectu & intelligibili Lib. II. | De Metaphysica Lib. XIII.

3 parts in one volume. [Part 1: 1517] 2°: ¶⁶ a⁶ b⁸ c- p⁶; 120ℓ.; [24] p., 1-108ℓ.; [Part 2: 1518] 2°: 2a-2t⁸; 150ℓ.; 1-150ℓ.; [Part 3: 1518] 2°: A-Y⁶; 174ℓ.; 1-174ℓ. Gothic lettering and double column through out. Each part has separate foliation and colophon with printer's device. Only the recto side of the leaf is numbered. COLOPHON: [Part 1:

Diui Alberti Magni

Sūmi in via peripathetica philosophi: Theolo-
giqꝫ profundissimi naturalia ac supranaturalia
opera per Marcū Antoniuꝝ Zimarā philoso-
phuꝝ excellētissimū nuper castigata erroribusqꝫ
purgata: necnō cuꝫ marginib⁹ optimis anno-
tatiōib⁹ ornatis doctrinaqꝫ excultis atqꝫ fideli-
ter ipressis feliciter incipiunt. Que sunt hec. vz.

De Physico auditu	Lib. VIII.
De Celo & mundo	Lib. IIII.
De Generatiōe & corrup.	Lib. II.
De Methauris	Lib. IIII.
De Mineralibus	Lib. IIII.
De Anima	Lib. III.
De Intellectu & intelligibili	Lib. II.
De Metaphysica	Lib. XIII.

THEOLOGIQUE PROFUNDISSIMI NATURALIA, 1517

recto of leaf 108] Aenetijs impensa beredum quondam Bo= | mini Octaviani Scoti Dodoe= | tiensis:ac sociorum. | 19. Februarij. | 1517. [Part 2: recto of leaf 150] Aenetijs impensa beredum quondam Bo= | mini Octaviani Scoti Dodoe= | tiensis:ac sociorum. | 29. Maij, 1518. [Part 3: recto of leaf 174] Aenetijs impensa beredum quondam Bo= | mini Octaviani Scoti Dodoe= | tiensis:ac sociorum. | 15. Januarij. | 1518. PAGE SIZE: 310 x 220 mm.

CONTENTS: [Part 1] ¶1r (=1r), Title page; ¶1v (=1v), Blank.; ¶2r-a6v, "Tabula" [=contents]; 1r-108r, "De Physico auditu."; 108v, Blank.

[Part 2] 1r-59r, "De celo r mundo."; 59v-77v, "De generatione ꝛ corruptione."; 78r-134r, "Metheorum."; 134v-150r, "De Mineralibus."; 150v, Blank.

[Part 3] Folios: 1r-50r, "De anima."; 50r-55v, "De itell'u ꝛ itelligibili."; 56r-174r, "Metaphysica."; 174v, Blank.

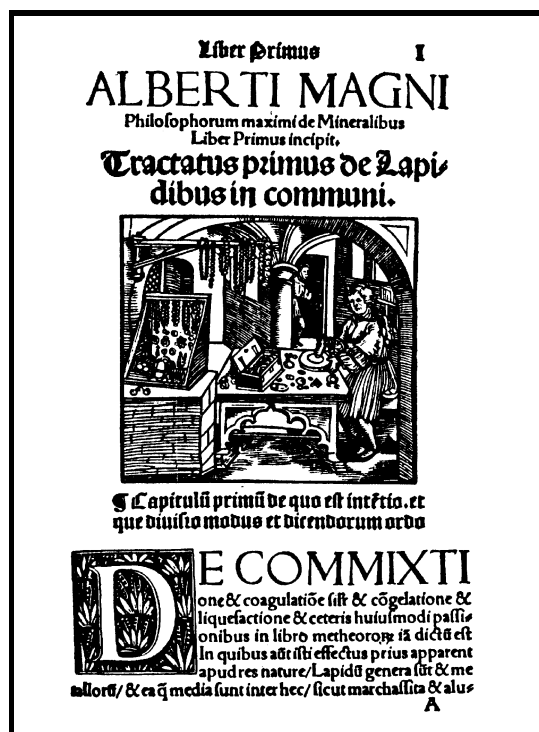
RARE. An important collected edition of scientific writings by the great scientist philosopher edited with notes added by the physician Marco Antonio Zimara [see note below]. Included are the author's books on mineralogy, astronomy, metaphysics, the intellect, etc. The volume is generously illustrated with woodcut scientific diagrams, and is one of the keystones in a long series of medieval scientific texts published by the heirs of Ottaviano Scoto in the early sixteenth century, mostly printed by Bonetus Locatellus [fl. 1486-1523]. The *De Mineralibus*, which includes works on chemistry and alchemy, precious stones and mineralogy generally is found in the second part.

Ottaviano Scoto. (BORN: Monza, Italy, c1440; DIED: Venice, Italy, 1498/9) *Italian publisher.* Scoto headed a distinguished family of Venetian printers. Born of a noble family of Monza, he came to Venice at the age of 35 and operated a press there between 1479 and 1484. He continued as an editor until 1498/9 whereupon his heirs, including his brothers and nephews, undertook their own activity (1499-1532). The original printer's mark of

Ottaviano Scoto, was an elegant circle from whose center extended a double cross. Within the circle are the letters O.S.M, the initials of Octavianus Scotus Modoetiensis (Ottaviano Scoto of Monza).

Marco Antonio Zimara. (BORN: Galatina, Italy, 1460; DIED: Padua, Italy, 1523) *Italian physician.* Although of humble origins, Zimara graduated from the University of Padua with degrees in philosophy and medicine. In 1507 he was named professor ordinary at Padua, and in 1514 he became mayor of Galatina. His last years were devoted to writing a guide to natural philosophy and metaphysics contained in the works of Aristotle and Averroës.

REFERENCES: Adams, *Cambridge Books*, 1967: A-529. • BL: [3706.g.2.]. • NUC: 7, 276-89 [NA 0140784]. (Scoto) ABI: II 564, 352-357. • Watt, *Bibliotheca Britannica*, 1824. • WBI. (Zimara) ABI: I 1015, 56-58. • Antonaci, A., *Marcantonio Zimara ricerche sull'aristotelismo del Rinascimento* Antonio Antonaci. Lecce, Editrice salentina, [1971-]. [Published as: *Pubblicazioni dell'Istituto di filosofia, Università di Bari.*]. • *Biographie Universelle.* • Jöcher, *Gelehrten-Lexikon*, Supplement. • Thomas, *Dictionary of Biography*, 1884: 2318. • WBI.



DE MINERALIBUS, 1518 (LEAF A1r)

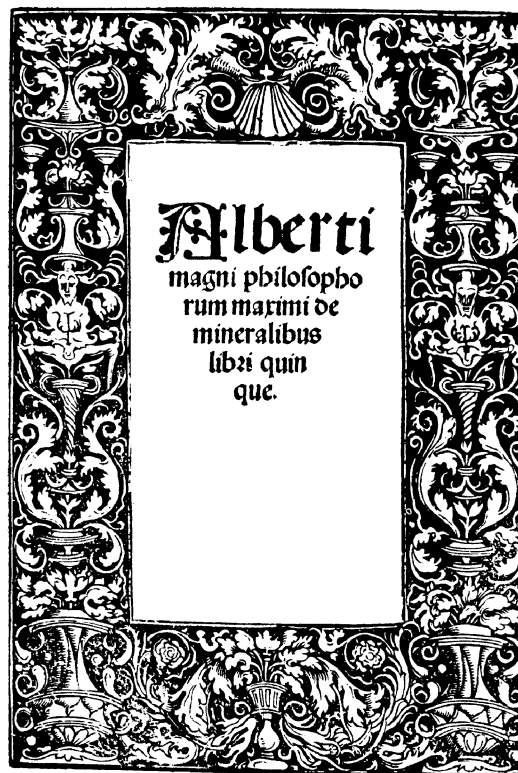
82. 6th edition, 1518: De mineralibus. Liber mineralium Domini Alberti Magni ... [COLOPHON: Impressum in Oppenheim per Jacobum Koebel, Anno. 1518].

4°: π⁴ A-S⁴; 76ℓ.; [8] p., I-LXXIIℓ., [2] p., woodcut ill. The leaves are printed on the recto side only. PAGE SIZE: 194 x 138 mm. RARE.

CONTENTS: [1 pg], Title page.; [1 pg], "Thiloninus Philyninus | Lectori."; [6 pgs], "Index Quinque Librorum ..."; Folios I-LXXIV (=A1r-S3v), Text.; [1 pg/=S4r], Woodcut, "De Alchimie phantastica fatiga | ..."; [1 pg/=S4v], Blank.

REFERENCES: Adams, *Cambridge Books*, 1967: A-527. • BL: [972.h.19.]. • BM/STC German: 13. • Duveen,

Bibliotheca, Supplement, 1953: p. 6. • *Freilich Sale Catalog*: no. 19. • GW: 688. • Hain, *Repertorium Bibliographicum*, 1826-38: 522. • NUC: 7, 276-89 [0140880]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 338. • Proctor, *Index*, 1898-1906: no. 11941. • Roller & Goodman, *Catalogue*, 1976: 1, 22. • Rothe, *Die Buchdruckerei des Jacob Koebel*, ????: no. 30. • Sallander, *Bibliotheca Walleriana*, 1955: no. 12105. • Wellcome Catalog (Books): 1, no. 132.



DE MINERALIBUS LIBRI QUINQUE, 1519

83. 7th edition, 1519: [Contained within an ornate woodcut border:] Alberti | magni philosopho | rum maximi de | mineralibus | libri quin | que.

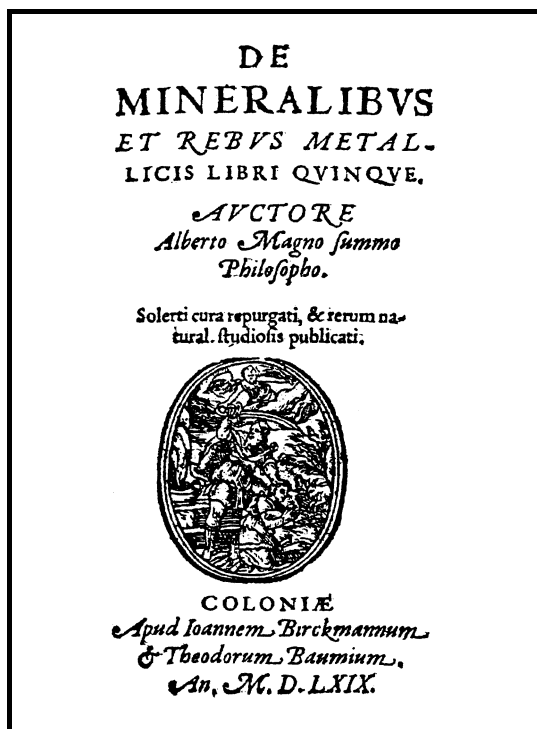
4°: 58 unnumbered ℓ. The title is enclosed by a woodcut border featuring arabesque and scallop shell by Hans Weiditz. COLOPHON: Excusa Auguste Vindellicorum, impensis Sigismundi Griffi & Marci Vuyrsung, 1519.

RARE. The title border is described by Röttinger, *Weiditz*, no. 15 and (from its appearance in another book) by Dodgson, 2, p. 149, no. 8. The Augsburg publisher was Sigmund Grimm and Marx Wirsung.

REFERENCES: GW: 686. • Hain, *Repertorium Bibliographicum*, 1826-38: 522. • NUC: 7, 276-89 [NA 0140881]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 336. • Ward & Carozzi, *Geology Emerging*, 1984: no. 41. • Wellcome Catalog (Books): 1, no. 131. • Wheeler Catalogue: 1, 51, no. 8.

Raimundi Lulii ... De secretis naturae: siue Quinta essentia libri duo his accesserunt Alberti Magni ... De mineralibus & rebus metallicis libri quin[que] quae omnia solerti cura repurgata rerum naturae studiosis recens publicata sunt per Gualtherum H. Ryff. (Argentorati, 1541 and other editions).

See: Lull, Ramon.



MINERALIBVS ET REBVS METALLICIS, 1569

84. Coloniae, 1569: De | Mineralibus | Et Rebus Metal- |
licis Libri Qvinque. | Avctore | Alberto Magno summo
| Philosopho. | Solerti cura repurgati, & rerum na- |
tural. studiosis publicati. | [ornament] | Coloniae | Apud
Ioannem Birckmannum | & Theodorum Baumium. | An.
M.D.LXIX.

12°: [A]-Q¹² R¹⁰; 202ℓ.; [1]-391, [12] p., title page
vignette, ornamental initials. PAGE SIZE: 122 x 73 mm.

CONTENTS: [1-2], Title page, verso blank; 3-
9, "...Præfatio."; [10], blank; 11-89, "Liber I. De
Materia lapidum."; 90-224, "Liber Secundus. Qvi est de
Lapidibus pretiosis, ..."; 225-318, "Incipit Liber Tertius de
Mineralibus, in quo determinatur de metallis in communi."; [319], blank; 320-375, "In Quartum librum in Quo
determinatur de metallis in Speciali."; 376-391, "De Natura
Salis & speciebus & modis."; [12] pgs, "Index Librorum
Alberti Magni de mineralibus & rebus metallicis."

SCARCE. The text covers the use of stones and
minerals in medicine, precious stones, mineralogy in terms
of Aristotle's four elements, and a listing of known mineral
species?

REFERENCES: Adams, *Cambridge Books*, 1967: no. 528.
• BL: [977.a.13.]. • Hoover Collection: no. 39. • LKG: III
14. • NUC: 7, 276-89 [NA 0140883].

Opera Omnis

85. — Latin, 1651.

Beati | Alberti | Magni, [...2 lines of titles and
memberships...] | Opera | Qvæ Hactenus Haberi
Potvervnt, | Sv̄b | R^{mis} PP. FF. [Three lines
braced on either side:] Thoma Tvrc̄o. | Nicolao
Rodvlphio. | Ioan. Baptista De Marinis. [After
the closing brace:] Eiusdem Ord. Ma- | gistris

Generalibus. | In Lvcm Edita. | Studio & labore
R.A.P.F. Petri Jammy, sacræTheologiæ Doctoris,
| Conuentus Gratianopolitani, eiusdem Ordinis. |
Tomvs Primvs. | [large rectangular ornament] | [rule]
| Lvgdvni, | Sumptibus [Four lines braced on the
left:] Clavdii Prost. | Petri & Clavdii Rigavd, Frat.
| Hieronymi De La Garde. | Ioan. Ant. Hvgvetan.
Filij. [After the closing brace:] Via Merca- | toria. |
[rule] | M. DC. LI. | Cvm Privilegio Regis.
21 vols.

VERY SCARCE. The collected works of Albertus
Magnus, edited by the Dominican Petri Jammy. The
De Mineralibus is contained in volume 2, part 4, pp.
201-75. The breakout of the volumes consists of: vols.
1 to 6, the Aristotelian commentaries, vols. 7 & 8,
commentaries on the Old Testament, vols. 9 to 11,
commentaries on the New Testament, vol. 12, sermons,
vol. 13, commentaries on Dionysios Areopagites and
the Compendium theologicæ veritatis, vols. 14 to 16,
commentaries on the Books of sentences of Peter
the Lombard, vols. 17 & 18, Summa theologiæ, vol.
19, Summa de creaturis, vol. 20 treatises on the
Holy Virgin, and vol. 21, Miscellanea, including the
Philosophia pauperum, and the De alchimia libellus.
There is also an index rerum memorabilium to the
Parva naturalia in volume 5.

REFERENCES: BL: [L.6.a.1.]. • CBN: 1, 496. • NUC:
7, 276-89 [NA 0140769]. • Sarton, *Introduction*, 1928-52: 2,
941-2.

86. 1890-9: B. Alberti Magni Ratisbonensis episcopi, Ordinis
prædicatorum, Opera omnis, ex editione lugdunensi
religiose castigata, et pro auctoritatibus ad fidem vulgatæ
versionis accuratiorumque patrologiæ textum revocata,
auctaque b. Alberti vita ac bibliographia operum a p.p.
Quétif et Echard exaratis, etiam revisa et locupletata, cura
ac labore Augusti Borgnet ... Parisiis, Apud Ludovicum
Vivis, 1890-9.

38 vols.

VERY SCARCE. Collected works of Albertus Magnus,
edited by Auguste Borgnet and helped later by Emile
Borgnet, both priests. *Mineralium libri quinque* is contained
in volume five. Contains essentially the same collection
of Albertus' works as that published in 1651 but in
a somewhat different order. The main novelty is the
long introduction covering biographical and bibliographical
details.

REFERENCES: BL. • CBN: 1, 496. • NUC: 7, 276-89
[NA 0140773]. • Sarton, *Introduction*, 1928-52: 2, 941-2.

Supposititious & Doubtful Works

87. — Latin, c1477 [First edition].

Liber aggregationis, seu Liber secretorum de vir-
tutibus herbarum, Lapidum, et animalium quorun-
dam. [Ferrara, Severinus Ferrariensis, c1477].

4°: a-e⁸ f⁴; 44ℓ., 27 lines.

CONTENTS: a1 (=1), Blank; a2r (=2r), "Liber
aggregationis seu liber secretorum alb'ti | magni de
virtutibus herbarum lapidum et anima | lium quorundaz
Liber primus de uiribus quarun | dam herbarum. |
[S3] Icut uult ph's in pluribus locis Omnis | scientia
de genere bonorum est. ..."; b1r (=9r), "et nascitur in
gremio testudinis indico et esse uari | ..."; c5r (=21r), line
18: "Et nota q Jupiter et Uenus boni sunt . Saturnus
| et Mars mali . Sol uero et Luna mediocres. |

Liber aggregationis seu liber secretorum alberti magni de uirtutibus herbarum lapidum et animalium quorundam; Liber primus de quibus quarundam herbarum.

Incipit uale p[ro]p[ri]a in pluribus locis Omnis scientia de genere bonorum est. Uerum in enim operatio aliquando bona aliquando mala propter scientiam mutatur ad bonum et ad malum finem ad quem operatur. Ex quo concluduntur duo quorum unum et primum est: quod scientia magis calis non est mala; namque per eius cognitionem potest evitari malum et prosequi bonum. Concluditur etiam secundum quod ex quo effectus laudatur propter finem atque uirupatur etiam finis scientie aliquando malus puta quando non ordinatur ad bonum uel ad uirtutem. Ex hoc sequitur quod scientia uel operatio aliquando bona uel mala. Quia igitur magis calis scientia seu cognitio bona est ut presuppositum est et mala aliquantulum existit in speculatione rationis et in speculatione naturalium secundum quod ab antiquis auctoribus examinatur et percipitur uno et ego met Albertus ut in pluribus ueritatem inueni et ueritatem suppono quo ad aliqua ex chyrantia libro et libro Alcorath primo narrabo de quibusdam herbis post de quibusdam lapidibus Tertio de quibusdam animalibus et de uirtutibus eorumdem.

ai

LIBER AGGREGATIONIS, c1477

Mercurius autem cum bonis bonus . et cum ma= | lis malus. | ..."; c5v (=21v), "EIVSDEM ALBERTI MAGNI. | DE MIRABILIBVS MVNDI FE | LICITER INCIPIT. | [4]OSTQVAM SCIVIM | VS QVOD OPVS SAPI | ENTIS EST FACERE | CESSARE MIRABILIA | rerum ..."; f4v (=44v), line 21: "... et si tres essent habes .i.8. et sic de aliis | Unde uersus . | Etatem Lune duplica post addito quinq[ue]. | Quinq[ue] dabis signo quo Lune inceptit origo. | Et Sic Est Finis."

EDITIO PRINCEPS. Extremely rare. As its Latin title suggests, *Liber Aggregationis*, or "book of collected items," *The Book of Secrets* is an anthology rather than a single work. The treatment of the subject matter is also sensational, reinforcing the popular myths about nature. It is divided into sections describing the marvellous properties of herbs, stones, and beasts. However, within each part the text is collected from a wide variety of sources. The text may be divided into these component parts: (1) On Herbs describes 16 herbs described in terms of their magical properties, (2) On Stones repeats 45 entries from Albertus Magnus' *Mineralia*, which is followed by a single paragraph taken from the 7th century encyclopedist, ISIDORE OF SEVILLE, (3) On Beast, in which 18 beasts—animals, birds and fish are described, and (4) On the Astrological Influence of Planets containing a treatise on the hours of the day governed by the various planets. In later editions of *The Book of Secrets* another formerly independent treatise describing "The Marvels of the World" is sometimes appended.

Although the preface and a passage at the end

of the section dealing with beasts attribute this as an original work of Albertus Magnus, it is very different from the other known writings of him. It was written, however, contemporary with Albertus or shortly after he died; the earliest surviving manuscripts are from the late 13th century, and Albertus died in 1279. It may be that *The Book of Secrets* was written by a follower of Albertus; certainly, as Thorndike writes, "There can be little doubt that it pretends to be a product of his experimental school among the Dominicans at Cologne." Sometimes the text has been attributed wrongly to Albertus de Saxonia [which see note below].

Secrets in literature became a popular tradition during the Middle Ages; texts of this type were written for the popular audience, not scholarly pursuit. Despite the scorn of the scholars, however, this literature capitalized on the prestige associated with the great scholars of the past including Albertus Magnus. They each have many works spuriously attributed to them. This is not surprising when one realizes that the intellectual climate constrained many scholars to cast their writings in the form of commentaries on the works of the ancients. For example, the whole of Albertus' vast output was intended by the author to be a commentary on Aristotle, though it contains much original work.

The most interesting fact about the *Liber Aggregationis* is not that it was written but that it enjoyed wide popularity for so long. With the introduction of mechanical printing this work became an incunabula best seller with more than 45 editions being published before 1501. It was perennially translated, reworked and edited for four more centuries with the last edition appearing in 1937.

The *Liber Aggregationis* was one of the most widely known and republished works in the literature that gained popularity during the Middle Ages. The demand for this work is demonstrated by the survival of a large number of manuscripts dating from as early as the 12th century and by the fact that several of these continued to be copied, anthologized, translated into the incunabula period. With the invention of printing the *Liber Aggregationis* was issued in more than fifty Latin editions during the 15th Century, with the first dated edition making its appearance in 1478 from the press of Johann Schriber of Bologna. During the incunabula period it also appeared in Italian, Catalan, and French versions. Commonly, the *Liber Aggregationis* was also bound with Albertus Magnus' *De Mirabilibus Mundi* and the *Parvum Regimen Sanitatis*.

Albertus de Saxonia. (BORN: Saxony, Germany, c1330; DIED: c1390) *German theologian, philosopher & naturalist.* Albertus was the son of a Saxon farmer. He graduated from the University of Paris and was appointed the first Rector of the University of Vienna in 1365. Then from 1366 to 1390 he was Bishop of Halberstadt in Germany. As a logician, he was at the forefront of the movement that expanded the analysis of language based on the properties of terms, especially their reference (in Latin: *suppositio*), but also in the exploration of new fields of logic, especially the theory of consequences. As a natural

ALBERTUS MAGNUS

philosopher, he contributed to the spread of Parisian natural philosophy throughout Italy and central Europe. Because of the authority of his name, the *pseudo*-Albertus Magnus work, *Liber aggregationis* or *Secreta de herbis, lapidibus et mineralibus* was sometimes issued under his name.

REFERENCES: BL: [IA. 25683]. • BMC: 6, 609. • GW: 630. • Klebs, *Incunabula Scientifica*, 1938: no. 18.14. • Osler, *Bibliotheca Osleriana*, 1969: no. 126. • Proctor, *Index*, 1898-1906: no. 5743. • Reichling, *Appendices ad Hainii-Copingeri*, 1905-14: CR 166. (Albertus de Saxonia) ADB. • Catholic Encyclopedia. • DBA: I 11, 206-211; II 16, 124, 124a, 125a-128. • Ferchl. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • NDB. • Österreich Biographisches Lexikon. • Poggendorff: I, col. 24. • Stange, E., ed., Arnoldus Saxo, *De finibus [floribus] rerum naturalium (um 1225) Die Enzyklopädie*. Herausgegeben von Emil Stange. Beilage zum Jahresbericht des Königlichen Gymnasiums zu Erfurt. Erfurt, 1905-07. • Stange, E., Arnoldus Saxo, *der älteste encyklopädist des dreizehnten jahrhunderts*. Halle, 1885. 66 p. [Inaugural-dissertation.]. • WBL. • World Who's Who in Science: p. 24. • Worstbrock, F.J., "Arnoldus Saxo," in *Verfasserlexikon*, 1, 485ff.

88. Bologna, 1478: Liber aggregationis, seu Liber secretorum de virtutibus herbarum, lapidum et animalium quorundam. [Bologna.] Johannes Schriber de Annunciata, 1478.

4°: a⁸ b-e⁶; 32ℓ., double column, 35-36 lines.

CONTENTS: a1r (=1r), "Liber aggre | gationis seu liber secretoꝝ | Alberti magni de virtutib⁹ | herbaꝝ lapidum ⁊ aialium | quorundam. Liber primus | de viribus quarundaz her- | barum. | [S4] Icut vult | ph's | i pluribus locis. | Omnis scientia | de genere bonoꝝ est. ..."; b1r (=9r), "Si uis curare me- | ..."; c1r (=15r), line 18: "Et nota q̄ Ju | piter ⁊ Ve- | nus boni sūt . Saturnus et Maris mali . Sol vō ⁊ Luna medi= oces. | Mercurius autem cum bo- | nis bonus . ⁊ cūmalis mal⁹ . | . finis ."; e6r (=32r), line 9: "... Et si tres essent | habes .j.8. ⁊ sic de alijs. | Uñ versus . | Etatem Lune duplica post | addito quinqz. | Quiqz dabis signo quo Lu | ne inceptit origo. | Impressuꝝ | quidē est hoc opu | sculū per Magi- | strū Johānem de | Annūciata de | Augusta. | Laus deo paraseqz | virgini Marie . nec nō | toti curie celesti trium | phanti. Anno salutis . | M.cccc.lxxvij."; e6v (=32v), Blank.

VERY RARE. With *De Mirabilibus Mundi*. This is the first dated edition from the Bologna press of Johannes Schriber.

REFERENCES: BL: [IA 28760]. • BMC XV: 6, 818 [IA 28760]. • Goff: A-249. • GW: no. 631. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 535. • IGI: no. 185. • Klebs, *Incunabula Scientifica*, 1938: no. 18.15. • Osler, *Incunabula Medica*, 1923: no. 148. • Pellechet, *Catalogue General des Incunables*, 1970: no. 360. • Polain, *Catalogue*, 1932: no. 75. • Proctor, *Index*, 1898-1906: no. 6547.

89. Strassburg, c1478: Liber aggregationis ... [Strassburg, Henricus Ariminensis, c1478].

4°: [a-d⁸] (unsigned); 32ℓ., 34 lines. VERY RARE.

REFERENCES: GW: no. 619. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 523.

90. Rome, 1480: Liber aggregationis ... [Rome, Stephan Planckn, not before 1480].

4°: [1-3⁸ 4⁶] (unsigned; 1/1 blank); 30ℓ., double column, 33 lines.

CONTENTS: 1/1 (=1), Blank.; 1/2r (=2r), "¶ Liber aggregatiōis seu liber | secretoꝝ Alberti Magni de vir | tutibus herbarū | lapidū ⁊ ani- | malium quorundam. | ¶ Liber primus de virib⁹ qua- | rundam herbarum. | [|]cut vult Phūs in | pluribus locis : oīs | scientia de genere | bonoꝝ est. ..."; 2/1r (=9r), "chrystalli. De hoc referunt anti | ..."; 4/6r (=30r), line 7: "si tres eēnt : habes xviii | Et sic de alijs. Unde versus : | Etatem lune duplica : post addi | to quinqz. | Quinqz dabis signo : quo lune | inceptit origo. | ¶ Finis. | [register in two columns]. ... [End of column 2, line 5:] "ciem que."; 4/6v (=30v), blank.

VERY RARE. With *De Mirabilibus Mundi*.

REFERENCES: Goff: A-250. • GW: no. 632. • IGI: no. 186. • Klebs, *Incunabula Scientifica*, 1938: no. 18.16. • Pellechet, *Catalogue General des Incunables*, 1970: no. 346.

91. Rome, 1481: Liber aggregationis ... [Rome, Georg Herolt, about 1481].

4°: 22ℓ., double column, 40 lines.

CONTENTS: 1r, "Liber aggregatiōis seu liber | secretorū Alberti magni de uir | tutibus herbarū. lapidū . ⁊ anima | lium quorundā. Liber primus δ' | uirtutibus quarundā herbarum. | [S4] Icut vult Philoso | phus in pluribus lo | cis . Omnis scientia | de genere bonorū | est."; 22v, "Etatem lune duplica post addito | quinqz . Quinqz dabis signo . quo | lune inceptit origo. | finis huius operis.

VERY RARE. With *De Mirabilibus Mundi*.

REFERENCES: Goff: no. A-251. • GW: no. 633. • IGI: no. 187. • Klebs, *Incunabula Scientifica*, 1938: no. 18.17.

92. Bologna, 1482: Liber aggregationis ... Bologna, Petrus de Heidelberga, 1482.

4°: a-e⁶; 30ℓ., Gothic character, double columns, 32 lines.

CONTENTS: a1r, incipit: "Liber aggregatatiōis seu liber | secretorum Alberti magni de | virtutitubus herbaꝝ. lapidū. ⁊ | animalū quorūdaz incipit. Li | ber primus de viribus quarū- | dam herbarum. | [S3] Icut vult phūs ī plu | ribus locis ..."; e5v, col. 2, colophon: "Impressum est quideꝝ hoc opus per Magistrū Petruū | de Heydelberga. in Incl̄yta ciuitate Bononie. Anno do | mini M.cccc.lxxxij."; e6, Blank.

VERY RARE. With *De Mirabilibus Mundi*.

REFERENCES: BMC XV: 6, 829 [IA 28742]. • Goff: A-252. • GW: no. 634. • Hain, *Repertorium Bibliographicum*, 1826-38: H 536. • Klebs, *Incunabula Scientifica*, 1938: no. 18.18. • Pellechet, *Catalogue General des Incunables*, 1970: no. 361.

93. Speyer, c1483: Liber aggregationis ... [Speyer, Johann and Konrad Hist, c1483].

4°: [a-d⁸] (unsigned); 32ℓ., 34 lines. VERY RARE.

REFERENCES: GW: no. 623. • Pellechet, *Catalogue General des Incunables*, 1970: no. 351.

94. Paris, c1483: Liber aggregationis ... [Paris, Simon Doliatoris, c1483].

4°: a-d⁸; 32ℓ., 33 lines. VERY RARE.

REFERENCES: GW: no. 641. • Pellechet, *Catalogue General des Incunables*, 1970: no. 345.

95. Reutlingen, 1483: Liber aggregationis ... [Reutlingen, Michel Greyff, about 1483].

4°: [a-d⁸] (unsigned); 32ℓ., 33-34 lines. VERY RARE.

CONTENTS: a1, Blank.; a2r, "Liber aggregationis seu liber secretorum alberti | magni de virtutitibus [!] herbarū lapidū ⁊ aialū quorū | dā. Liber pm⁹ δ' vi | rib⁹ q̄rudā herbaꝝ. | [S12] Icut vult phūs in plu | ribus locis Omnis sciē | cia de genere bonorū ē | ..."; d8v, line 28: "... et si | tres essent habes .xviii. et sie de alijs. Vñ versus | Etatem lune duplica post addito quinqz. | Quinqz dabis signo quo lune inceptit origo. | Et sie est finis."

REFERENCES: Goff: A-253. • GW: no. 620. • Hain, *Repertorium Bibliographicum*, 1826-38: 525*.

96. Speier, 1483: Liber aggregationis ... [Speier, Johann and Conrad Hist, about 1483].

4°: [a-d⁸] (unsigned); 32ℓ., 33 lines.

CONTENTS: a1, Blank.; a2r, "Liber Aggregacionis seu liber Secretorum | Alberti Magni de virtutibus herbarum lapidū | et animalium quorundam. | Liber Prim⁹ de virtutib⁹ q̄rundā herbarū. | [S9] Icut vult ph'usplurib⁹ lo- | cis Omis sciencia de gene' | bonoꝝ est ..."; d8r, line 31: "... et | si tres essent habes .xviii. ers de alijs. Vñ vs⁹ | Etatem lune duplica post addito q̄n3. Quinqz | dabis signo quo lune inceptit origo."; d8v, Blank.

VERY RARE. With *De Mirabilibus Mundi*.

- REFERENCES: Goff: A-254. • GW: no. 621. • Hain, *Repertorium Bibliographicum*, 1826-38: H 524*. • Klebs, *Incunabula Scientifica*, 1938: no. 18.5.
- 97. Speier, 1483:** Liber aggregationis ... [Speier, Johann and Conrad Hist, about 1483].
4°: [a-d⁸] (unsigned); 32ℓ., 33 lines.
VERY RARE. With *De Mirabilibus Mundi*.
REFERENCES: Goff: A-255. • GW: no. 622. • Klebs, *Incunabula Scientifica*, 1938: no. 18.6. • Pellechet, *Catalogue General des Incunables*, 1970: no. 343. • Reichling, *Appendices ad Hainii-Copingeri*, 1905-14: no. 4. • Wellcome Catalog (Books): 1, no. 116.
- 98. Cologne, 1485:** Liber aggregationis ... [Cologne, Heinrich Quentell, about 1485].
4°: a-d⁸ e⁶ f⁴; 42ℓ., 27 lines.
VERY RARE. With *De Mirabilibus Mundi*.
REFERENCES: BL: [IA.55455.]. • Campbell, *Annales de la Typographie*, 1874-90: no. 82. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 171. • Goff: A-256. • GW: no. 624. • Klebs, *Incunabula Scientifica*, 1938: no. 18.8. • Oates, *Cambridge 15th Century Books*, 1954: no. 789. • Proctor, *Index*, 1898-1906: no. 1381. • Voulliéme (Köln): no. 39.
- 99. London, c1485:** Liber aggregationis ... London, Wilhelmus de Machlinia, [c1485].
4°: a-d⁸ e⁶ f⁴; 42ℓ., 27 lines. VERY RARE.
REFERENCES: Duff, *Fifteenth Century English Books*, 1917: no. 9. • GW: no. 653. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 534. • Proctor, *Index*, 1898-1906: no. 9770.
- 100. Rome, c1485:** Liber aggregationis ... [Rome, Eucharius Silber, c1485].
4°: [a-c⁸] (unsigned); 24ℓ., double column, 41 lines. VERY RARE.
REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 172. • GW: no. 635. • Voulliéme (Berlin): no. 3498.
- 101. Antwerp, c1487:** Liber aggregationis ... [Antwerp, Matthias van der Goes, c1487].
4°: a-f⁶ g⁴ H⁶ i⁴ k⁶; 56ℓ., 30 lines. VERY RARE.
REFERENCES: Campbell, *Annales de la Typographie*, 1874-90: no. 79. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: I, no. 527 [not Hain 527]. • GW: no. 659.
- 102. Geneva, 1487:** Liber aggregationis, seu, Liber secretorum Alberti magni de virtutibus herbarum lapidum & animalium quorundam. [Geneva, Louis Cruse, after 1487].
4°: a⁶ b⁸ c⁶ d⁸.; 28ℓ., 36 lines. VERY SCARCE.
REFERENCES: GW: no. 643. • Pellechet, *Catalogue General des Incunables*, 1970: no. 355.
- 103. Venice, 1487:** Liber aggregationis ... [Venice, Bartholomaeus de Zanis, not before 1487].
4°: ab⁸ b⁸ c⁶ d⁴; 26ℓ., 38 lines.
VERY RARE. With *De Mirabilibus Mundi*.
REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 169. • Goff: A-257. • GW: no. 636. • Hain, *Repertorium Bibliographicum*, 1826-38: HR 516. • Klebs, *Incunabula Scientifica*, 1938: no. 18.20 [1488]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 357.
- 104. Geneva, c1487?:** Liber aggregationis ... [Geneva?, c1487?].
4°: a-d²; 28ℓ., 36 lines, Gothic type. VERY RARE.
REFERENCES: GW: no. 642. • Pellechet, *Catalogue General des Incunables*, 1970: no. 354.
- 105. Antwerp, c1488:** Liber aggregationis ... [Antwerp, Matthias van der Goes, c1488].
4°: a-f⁶ g⁴; 40ℓ., 30 lines. VERY RARE.
REFERENCES: GW: no. 654. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 527.
- 106. Antwerp, 1488/91:** Liber aggregationis ... [Antwerp, Mathias van der Goes, about 1488/91].
4°: a-q⁶; 96ℓ., 30 lines.
VERY RARE. With Adelardus Bathoniensis, *Qaestiones Naturales, Quaestiones Naturales Philosophorum*.
REFERENCES: Camp-Kron: no. 81b. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 166a. • Goff: A-258. • GW: no. 666. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 532. • Klebs, *Incunabula Scientifica*, 1938: no. 18.53. • Proctor, *Index*, 1898-1906: no. 9407.
- 107. Antwerp, c1488/91:** Liber aggregationis ... [Antwerp, Matthias van der Goes, c1488/91].
4°: a-q⁶; 96ℓ., 30 lines. VERY RARE.
REFERENCES: GW: no. 666. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 532 [= Copinger 166a]. • Proctor, *Index*, 1898-1906: no. 9407.
- 108. Paris, c1490:** Liber aggregationis ... [Paris, Antoine Caillaut, c1490].
4°: a-c⁸; 24ℓ., 38 lines. VERY RARE.
REFERENCES: BMC XV: [1173.1.2 (1)]. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 170. • GW: no. 649. • Proctor, *Index*, 1898-1906: no. 7973.
- 109. Strassburg, 1490:** Liber aggregationis ... Strassburg, [Johann Grüninger] XII. Kal. Oct. [20 September] 1490.
4°: a-d⁸; 32ℓ.; double column, 34-35 lines. VERY RARE.
REFERENCES: GW: no. 625. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 537=538. • Pellechet, *Catalogue General des Incunables*, 1970: no. 362.
- 110. Rouen, c1490:** Liber aggregationis ... [Rouen?, c1490?].
4°: [a]-d⁸; 32ℓ., 33 lines, Gothic type. VERY RARE.
REFERENCES: GW: no. 648. • Pellechet, *Catalogue General des Incunables*, 1970: no. 350.
- 111. Paris, c1490:** Liber aggregationis ... [Paris?, c1490?].
4°: a-d⁸; 32ℓ., 33 lines, Gothic letters. VERY RARE.
REFERENCES: GW: no. 647. • Pellechet, *Catalogue General des Incunables*, 1970: no. 349.
- 112. Lyons, 1490:** Liber aggregationis ... [Lyons?, c1490?].
4°: A-D⁸; 32ℓ., 33 lines, Gothic and Roman type. VERY RARE.
REFERENCES: GW: no. 646. • Pellechet, *Catalogue General des Incunables*, 1970: no. 348.
- 113. Lyons, c1490:** Liber aggregationis ... [Lyons?, c1490?].
4°: a-d⁸; 32ℓ., 33 lines, Gothic initials. VERY RARE.
REFERENCES: GW: no. 645. • Pellechet, *Catalogue General des Incunables*, 1970: no. 347.
- 114. c1490:** Liber aggregationis ... [South France?, Printer to Alexander Magnus, c1490].
4°: a-b⁸ c⁴; 20ℓ., 44 lines. VERY RARE.
REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 174. • GW: no. 644. • Pellechet, *Catalogue General des Incunables*, 1970: no. 358. • Proctor, *Index*, 1898-1906: no. 7377.
- 115. Paris, c1490:** Liber secretorū Alberti magni. [fol. 2 recto:] Liber aggregationis seu liber secretorū Alberti magni de virtutibus herba?, lapidū, et animalū quorūdam. [fol. 12 recto:] Eiusdē alberti magni de mirabilib? mūdi felicitē incipit. [Antoine Caillaut: Paris, 1490?]
4°: a-c⁸.; 24ℓ., 38 lines. With the printer's device on the titlepage. VERY SCARCE.
REFERENCES: BL: [IA.39554.].
- 116. Rome, c1490:** Liber aggregationis ... [Rome?, Stephann Plannck?, c1490].
4°: 32ℓ., double column, 35 lines. VERY RARE.
REFERENCES: GW: no. 638 [also no. 637]. • Reichling, *Appendices ad Hainii-Copingeri*, 1905-14: no. 1437.

ALBERTUS MAGNUS

117. Antwerp, c1491: Albertus magnus | De virtutibus herbarum | De virtutibus lapidum | De virtutib⁹ animalium et | De mirabilibus mundi | Item paruū regimē sani= | tatis balde vtile.

4°: a-e⁶ f-g⁴ h⁶ i⁴ k⁶; 54ℓ., 30 lines.

VERY RARE. With *De Mirabilibus Mundi* and *Parvum Regimen Sanitatis. Quaestionese Naturales Philosophorum*.

Attributed to Antwerp, Mathias van der Goes, about 1491.

REFERENCES: BMC XV: 9, 184 [IA 49921]. • Campbell, *Annales de la Typographie*, 1874-90: Suppl. 2, no. 80. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 175. • Goff: A-259. • GW: no. 660. • Klebs, *Incunabula Scientifica*, 1938: no. 18.47. • Oates, *Cambridge 15th Century Books*, 1954: no. 3965. • Polain, *Catalogue*, 1932: no. 74.

118. Lyons, c1491/2: Liber aggregationis ... [Lyons, Jean Trechsel?, c1491/2].

4°: a-d⁸; 32ℓ., 32 lines. VERY RARE.

REFERENCES: GW: no. 650. • Pellechet, *Catalogue General des Incunables*, 1970: no. 344.

119. Venice, 1492-1500: Liber secretorum Alber | ti magni de virtutibus | herbarum: ⁊ animalium quorundā. Eiusdem= | q³ liber de mirabilibus mundi: ⁊ etiam de qui= | busdam effectibus causatis a quibusdam anima | libus ⁊c.

8°: a-k⁴; 40ℓ., 27 lines.

VERY RARE. With *De Mirabilibus Mundi*.

Attributed to Venice from either the press of Johannes Emericus, de Spira or Bernardinus Benalius [GW].

REFERENCES: Goff: A-260. • GW: no. 640 [Venice, Genalius, after 1500?]. • Hain, *Repertorium Bibliographicum*, 1826-38: H 529*. • IGI: no. 193. • Klebs, *Incunabula Scientifica*, 1938: no. 18.11.

120. Leipzig, 1492: Liber aggregationis ... [Leipzig], Arnold von Köln, 1492.

4°: AA-BB⁶ CC⁴ DD-EE⁶; 28ℓ., 36 lines. VERY RARE.

REFERENCES: GW: no. 626. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 539.

121. Strassburg, 14 March 1493: Liber secretorum Alberti | magni de virtutibus her | barum . et animalium quorundam . Eiusdemq³ | liber: de mirabilibus mundi . et etiam de quibusdāz effectib[us] causat[is] a q[ui]busdam a[n]i[m]alib[us] ⁊c.

8°: a-d⁸; 32ℓ., double column, 31 lines. COLOPHON: Impressum Argentine [Strasbourg], [Johann Grüninger] Mcccxcixij p[ri]die id[us] Mar. [14 March 1493].

VERY RARE. With *De Mirabilibus Mundi*.

REFERENCES: BL: [IA.1419.]. • BMC XV: 1, 108 [IA 1419]. • Goff: A-261. • GW: no. 627. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 541*. • Klebs, *Incunabula Scientifica*, 1938: no. 18.11. • Proctor, *Index*, 1898-1906: no. 464.

122. Paris, 1493?: Liber Alberti magni de virtutib⁹ | herbarū/ lapidū ⁊ aīaliū quorū- | dam | ...

8°: a-d⁸ e⁴; 36ℓ., 31 lines.

VERY RARE. With *De Mirabilibus Mundi*.

Attributed to Paris, Antoine Caillaut, about 1493?

REFERENCES: Goff: A-262. • GW: no. 651. • Klebs, *Incunabula Scientifica*, 1938: no. 18.36. • Pierpont Morgan (B): no. 511.

123. Naples, 12 November 1493: Liber aggregationis ... Naples, Antoine Gontier, 12 November 1493.

4°: a-c⁸; 24ℓ., double column, 44 lines. VERY RARE.

REFERENCES: GW: no. 639. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 540. • Proctor, *Index*, 1898-1906: no. 6745.

124. Antwerp, not before 1494: Liber aggregationis ... Antwerp, Govert Bac, [not before 1494].

4°: a⁸ b⁴ c⁸ d⁴ e⁸ f⁴; 36ℓ., 36 lines. VERY RARE.

REFERENCES: GW: no. 661.

125. Antwerp, 1494: Liber aggregationis ... Antwerp, Govert Bac, [not before 1494].

4°: a⁸ b⁴ c⁸ d⁴ e⁸ f⁴; 36ℓ., 36 lines. VERY RARE.

REFERENCES: GW: no. 662.

126. Augsburg, 29 August 1496: Liber secretorum Alberti magni de virtutibus herbarum. et animalium quorundam. Eiusdemq[ue] liber. de mirabilibus mundi. et etiam de quibusda[m] effectibus causatis a quibusdam animalibus. [et]c. Augsburg, Johannes Schauren, 29 August 1496.

4°: a-b⁸ c-e⁶; 28ℓ., 29 lines. With initial spaces, some with guide-letters; without foliation and catchwords. COLOPHON: Impressum Auguste p[er] Johanne[m] schauren feria secunda post Bartholomei M.CCCC.LXXXXVj.

VERY RARE. With *De Mirabilibus Mundi*.

Contains the text of *De mirabilibus mundi* (leaves b8v-34v).

REFERENCES: BMC XV: 2, 393 [IA 6829]. • *BSB-Ink*: A-178. • Goff: A-263. • GW: no. 628. • Hain, *Repertorium Bibliographicum*, 1826-38: 542*. • Klebs, *Incunabula Scientifica*, 1938: no. 18.12. • Oates, *Cambridge 15th Century Books*, 1954: no. 969.

127. Antwerp, 1498: Liber aggregationis ... Antwerp, Govert Bac, 1498.

4°: a⁸ b⁴ c⁸ d⁴ e⁸ f⁴; 36ℓ., 36 lines. VERY RARE.

REFERENCES: Campbell, *Annales de la Typographie*, 1874-90: no. 83. • GW: no. 663. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 543.

128. Antwerp, 1499: Liber aggregationis ... Antwerp, Govert Bac, 1499.

4°: a⁸ b⁴ c⁸ d⁴ e⁸ f⁴; 36ℓ., 36 lines. VERY RARE.

REFERENCES: Campbell, *Annales de la Typographie*, 1874-90: no. 84a. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 176. • GW: no. 664. • Pellechet, *Catalogue General des Incunables*, 1970: no. 363. • Voulliéme (Berlin): no. 4809.

129. Cologne, 1499/1500: Liber aggregationis seu liber secretorum Alberti magni | de virtutibus herbarum . de virtutibus lapidum . et de virtu | tibus et efficacia animalium quorundam.

4°: a-b⁶; 12ℓ., 34 lines.

VERY RARE.

Attributed to Cologne, Cornelis de Zierikzee, about 1499/1500.

REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 167. • Goff: A-264. • GW: no. 618. • Klebs, *Incunabula Scientifica*, 1938: no. 18.2.

130. Antwerp, 1499 or later: Liber aggregationis ... Antwerp, Govert Bac, [1499 or later].

4°: a⁸ b⁴ c⁸ d⁴ e⁸ f⁴; 36ℓ., 36 lines. VERY RARE.

REFERENCES: Campbell, *Annales de la Typographie*, 1874-90: no. 84. • GW: no. 665. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 533.

131. Paris, 14—: Liber aggregationis ... [Paris, 14—].

4°: a⁸; 8ℓ., 36 lines. VERY RARE.

CONTENTS: a1r, "Liber aggregationis seu liber secretorū Alberti magni de | virtutibus herbarū et animalium quorūdam." a8v, end: "sit mundus ab omni corporis pollutōne | Explicit."

REFERENCES: GW: no. 617. • Pellechet, *Catalogue General des Incunables*, 1970: no. 353.

132. Cologne, 1500?: [A2] lbertus Madnus De | virtutibus herbarum. | De virtutibus Lapidum | De virtutibus Anima. [?] | liū De Mirabilibus | mundi Paruum | Regimen sani= | tatis valde | vtile. | ✱.

4°: A⁸ B⁴ C⁸ D⁴; 24ℓ., 38 lines.

VERY RARE. With *De Mirabilibus Mundi* and *Parvum Regimen Sanitatis*.

Attributed to Cologne, Cornelis de Zierikzee, after 1500?.

REFERENCES: BMC XV: 1, 310 [IA 5195]. • Goff: A-265. • GW: no. 655. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 528*. • Hoover Collection: no. 40. • Klebs, *Incunabula Scientifica*, 1938: no. 18.42. • Proctor, *Index*,

1898-1906: no. 1494. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 3064. • Voulliéme (Köln): p. 13 [After 1500].

133. Paris, c1500: Liber aggregationis ... [Paris, Guy Marchant, c1500].

4°: a-c⁸ d⁶; 30ℓ., 35 lines. VERY RARE.

REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 168. • GW: no. 652. • Pellechet, *Catalogue General des Incunables*, 1970: no. 352.

134. Cologne, 1500?: [A2] lbertus Magnus | De virtutib⁹ herbarum | De virtutibus Lapidum | De virtutibus Animalium | De mirabilib⁹ mūdi Paruum Regimen sanitas valde vtile | [woodcut].

4°: A⁸ B⁴ C⁸ D⁴; 24ℓ.

VERY RARE. With *De Mirabilibus Mundi* and *Paruum Regimen Sanitatis*.

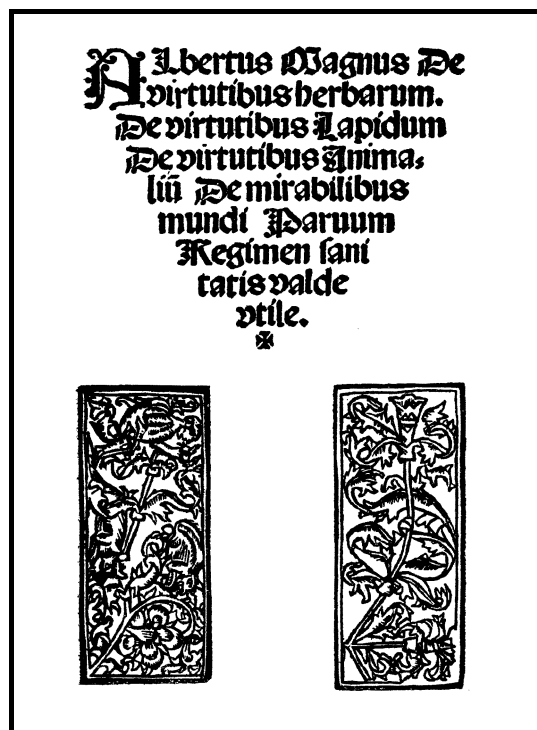
Attributed to Cologne, Cornelis de Zierikzee, after 1500?.

REFERENCES: Goff: A-266. • GW: no. 656. • Hunt Botanical Catalog: no. 4. • Klebs, *Incunabula Scientifica*, 1938: no. 18.43. • Pellechet, *Catalogue General des Incunables*, 1970: no. 356.

135. Vienna, c1500: Liber aggregationis ... [Vienna, Johann Winterburg, c1500].

4°: a-c⁸ d⁴; 28ℓ., 35 lines. VERY RARE.

REFERENCES: GW: no. 629. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 526.



DE VIRTUTIBUS HERBARUM., c1500

136. Cologne, c1500: [A2] lbertus Magnus De | virtutibus herbarum. | De virtutibus Lapidum | De virtutibus Anima= | liū De mirabilibus | mundi Paruum | Regimen sani | tatis valde | vtile. | ✱ | [two woodcuts lined up side by side.]

4°: 24ℓ., 39 lines, Gothic character, ornamental woodcuts on the title page.

VERY RARE. With *De Mirabilibus Mundi* and *Paruum Regimen Sanitatis*.

REFERENCES: Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 177. • Goff: A-267. • GW: no. 658. • Klebs, *Incunabula Scientifica*, 1938: no. 18.45. • Schreiber, *Kräuterbücher*, 1924: no. 3065. • Voulliéme (Berlin): no. 1093.

137. Paris, after 1500: Liber aggregationis ... [Paris?, after 1500].

4°: [a-b] c-d⁸ e⁶; 22ℓ., 29-30 lines.

EXTREMELY RARE. Known only in an incomplete fragment that is missing the first portion of the text.

REFERENCES: GW: no. 652a.

138. Cologne, after 1500: Liber aggregationis ... [Cologne, Kornelius von Zierikzee, after 1500].

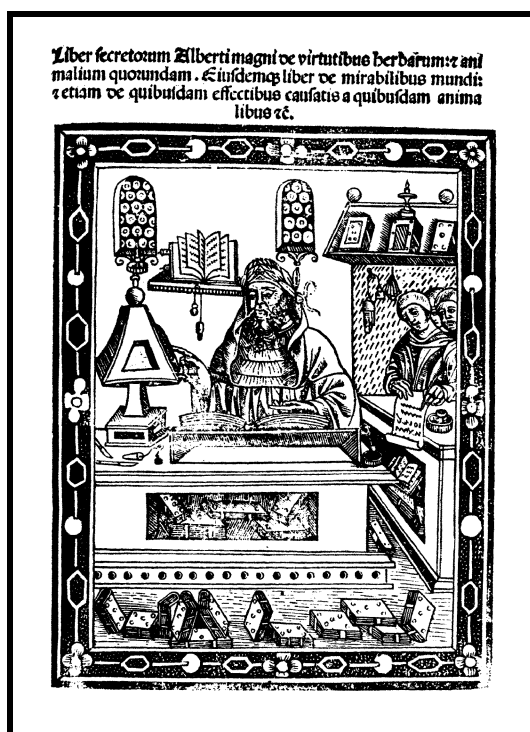
4°: A⁸ B⁴ C⁸ D⁴; 24ℓ., 38 lines. VERY RARE.

REFERENCES: GW: no. 657.

139. Antwerp, 1502: De virtutibus herbarū. De virtutibus lapidū. De virtutibus animalū, &c. [In oppido Antwerpiē, per me Goddfridū bac, 1502].

4° in 8s: a-f⁸; 40ℓ.; no pagination.

VERY SCARCE. Adams: 538.



LIBER SECRETORUM, 1502

140. Venice, 12 February 1502: Liber secretorum Alberti magni de virtutibus herbarum: et ani | malium quorundam. Eiusdemq; liber de mirabilibus mundi: et etiam de quibuidam effectibus causatis a quibusdam anima | libus &c. | [Large woodcut showing within a border a savant at a desk reading a book, while two customers wait].

4°: with large woodcut on the title page of a master teaching, Sessa's cat-and-mouse device at end. Printed in Venice by J.B. Sessa on 12 February 1502. VERY RARE.

REFERENCES: Essling, *Livres à Figures Vénitiens*, 1907-14: 847. • Honeyman Sale: no. 51. • Sander, *Livre à Figures Italiane*, 1941: no. 179.

ALBERTUS MAGNUS

141. Antwerp, 1504: Albertus Magnus. De virtutibus herbarum. De virtutibus lapidum. De virtutibus animalium et mirabilibus mundi. Item paruum regimen sanitatis valde vtile. (Incipiunt questiones naturales philosopho?) per me Godfridū back: in oppido Antwerpieñ, 1504.

4°: [76] p. VERY SCARCE.

REFERENCES: BL: [7321.c.19.].

142. Venice, 1509: Liber secretorum Alberti magni de uirtutibus herbarum: & animalium quorundam. Eiusdemq[ue] liber de mirabilibus mundi: & etiam de quibusdam effectibus [!] causatis a quibusdam animalibus &c. [Venice, 1509].

4°: 16 numb.ℓ. COLOPHON: Impressu[m] Venetiis per Marchio. Sessa. Anno domini. 1509. dies [!] uero 25. setembrio. Large woodcut illus. on t.-p. (astronomers with astrolabe) signed: L.F. VERY SCARCE.

143. Lugduni, 1560: Alberti cognomento Magni De secretis mulierum, libellus, scholijs auctus, & à mendis repurgatus. Eiusdem De virtutibus herbarum, lapidum, & animalium quorundam libellus. Item De mirabilibus mundi, ac de quibusdam effectibus causatis à quibusdam animalibus, &c. Lvgdvni 1560.

16°: A-Dd8.; ??ℓ.

VERY SCARCE. All 3 works are spurious; the "De virtutibus herbarum, lapidum, & animalium" together with the "De mirabilibus mundi" are better known under the title "Liber aggregationis"; also attributed to Albertus de Saxonia.

144. Lugduni, 1596: Alberti Magni De secretis mulierum libellus cum scholijs. Eiusdem de virtutibus herbarum, lapidum, & animalium quorundam libellus. Item, de mirabilibus mundi, ac de quibusdam effectibus causatis à quibusdam animalibus, &c. His accessit nunc de falconibus, astutibus, & accipitribus opusculum. ... Lugduni, 1596.

8°: A-Gg8 Hh4 Ii2; ??ℓ.;

VERY SCARCE. An additional title page (Y3r): Albertus Magnus de falconibus, Astutibus & Accipitribus.

REFERENCES: BL: [1477.cc.22.]. • Shaaber, *Sixteenth Century Imprints*, 1976: A-135.

145. Lyons, 1598: De secretis mulierum ... Eiusdem de virtutibus herbarum, lapidum, & animalium ... item de mirabilibus mundi ... Adieciimus & ob Materiae similitudinem Michaelis Scoti philosophi, De secretis naturae opusculum. Lyons, Antoine de Harsy, 1598.

8°: A-Z8 2A8 2B3; ??ℓ.; [3]-381, [9] p. VERY SCARCE.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 9. • Ferguson, *Histories of Inventions*, 1981: III, 26.. • NLM 16th Century Books (Durling): no. 90. • Shaaber, *English Seventeenth Century Imprints*, 1978: A-136.

146. Argentorati, 1607: Alberti Magni de secretis mulierum libellus, scholijs auctus ... Eiusdem de virtutibus herbarum, lapidum & animalium quorundam libellus. Item de mirabilibus mundi ... Michaelis Scotis ... de secretis naturae opusculum, etc. Argentorati, Per L. Zetznerum, 1607.

16°: 390 p. VERY SCARCE.

REFERENCES: BL: [1175.a.1.].

147. Francofurti, 1609: Trinum magicum, siuc secretorum naturalium ... celestium, infernalium opus ... continens I. Marci Antonii Zimaræ conclusiones physicas ... II. Alexandri Aphrodisi quæstiones et solutiones physico-mathematicas (Angelo Politiano interprete). III. Alberti magni tractatus tres de virtutibus herbarum, lapidum et animalium ... Accessere eiusdem Alberti libelli De mirabilibus mundi et secretis mulierum, vt & Auerrois ac Aristotelis propositiones ac solutiones physicae. Nunc primum in lucem editum à Longino Cæsare. Sumptibus A. Hummij: Francofurti, 1609.

8°: 328 p. VERY SCARCE.

REFERENCES: BL: [1141.a.7.].

148. 1615: Alberti Magni de secretis mulierum libellus ... Eiusdem de virtutibus herbarum, lapidum & animalium quorundam libellus. Item de mirabilibus mundi ... Michaelis Scoti ... de secretis naturae opusculum. Argentorati, per L. Zetznerum, 1615.

16°: 390 p. VERY SCARCE.

REFERENCES: BL: [1606/43.].

149. 1615: Tractatus Henrici de Saxonia, Alberti Magni discipuli, de secretis mulierum (quem ab Alberto excerpit) ... Accessit insuper ejusdem de virtutibus herbarum, lapidum, quorundam animalium, aliorumque libellus. Opera & impensa P. Musculi, Francofurti, 1615.

12°: 411 p. VERY SCARCE.

REFERENCES: BL: [1175.a.6.].

150. 1615: Alberti Magni Speculum astronomiæ nunc primum ... in lucem editum. Præmittuntur autem eiusdem authoris libelli, de virtutibus herbarum, lapidum, & animalium quorundam. Item de mirabilibus mundi, etc. Lugduni, 1615.

16°: 166 p. VERY SCARCE.

REFERENCES: BL: [1175.a.2.(2.)].

151. 1637: De secretis mulierum libellus, scholijs auctus, & a mendis repurgatus. Eiusdem de virtutibus herbarum, lapidum, & animalium quorundam libellus. Item de mirabilibus mundi, ac de quibusdam effectibus causatis a quibusdam animalibus, &c. Adieciimus & ob materiae similitudinem Michaelis Scoti philosophi, de secretis naturae opusculum. Cum indice locupletissimo. Argentorati, Sumptibus Haeredum Lazari Zetzneri, 1637.

8°: A-Y8 (Y7 blank); ??ℓ.; 340, [9] p. Printer's device on title page. VERY SCARCE.

152. 1643: Albertus Magnus de secretis mulierum. Item de virtutibus herbarum, lapidum et animalium. (De mirabilibus mundi-Michaelis Scoti libellus de secretis naturae.) Apud I. Ianssonium, Amstelodami, 1643.

12°: 366 p. VERY SCARCE.

REFERENCES: BL: [1173.a.2.].

153. 1665: Albertus Magnus de secretis mulierum. Item de virtutibus herbarum, lapidum et animalium. (De mirabilibus mundi-Michaelis Scoti libellus de secretis naturae.) Apud I. Ianssonium: Amstelodami, 1655.

12°: 358 p. The titlepage is engraved. VERY SCARCE.

REFERENCES: BL: [7581.a.14.].

154. 1655: Albertus Magnus De secretis mulierum. Item De virtutibus herbarum lapidum et animalium. Amstelodami, apud Iodocum Ianssonium, 1655.

358, [14] p.

VERY SCARCE. Engraved t.-p., illustrated. "Alberti Magni libellus, De mirabilibus mundi": p.172-219. "Michaeli Scoti libellus, De secretis naturae": p.220-358.

155. 1662: Albertus Magnus de secretis mulierum ; item De virtutibus herbarum, lapidum, et animalium. Amstelodami, Apud Ioannem Ianssonium, a[nn]o 1662.

12°: A-Pp12 Q-p6; ??ℓ.; 358, [14] p. (the last leaf blank) ; 13 cm. Engraved t.p., with illustrated border. De secretis mulierum, De virtutibus herbarum (Liber aggregationis), and De mirabilibus mundi are falsely attributed to Albertus Magnus. Cf. Deutscher Gesamtkat. Also attributed to Henricus de Saxonia.

VERY SCARCE. Other authors: Henricus, de Saxonia, 13th cent. Scot, Michael, ca. 1175-ca. 1234.

156. 1669: Albertus Magnus de secretis mulierum ; item de virtutibus herbarum lapidum et animalium [microform]. Amstelodami : Apud Henricum et Theod. Boom, a[nn]o 1669.

329 p.

VERY SCARCE. Various attributed to Albertus Magnus, Albertus de Saxonia, and Henricus de Saxonia.

Contents: De secretis mulierum – Liber aggregationis – De mirabilibus mundi – Michaelis Scoti libellus de secretis naturae.

ALBERTUS MAGNUS

169. Paris, c1500: ¶ Le grant albert | Des secretz des vertus des herbes: pierres bestes. | et aultres liures des merueilles du monde dau- | cuns effectz causez daucunes bestes.

4^o: a-h⁴; 32ℓ., woodcut initial.

CONTENTS: alr, ¶ Le grant albert | Des secretz des vertus des herbes: pierres bestes. | et aultres liures des merueilles du monde dau- | cuns effectz causez daucunes bestes. | ¶ Item y est de nouveau adioust vng traicte de | pline: determinant des secretz ⁊ merueilles daucu- | nes choses naturelles. | [Woodcut].; h3v, line 25, ¶ Pour la peste principalement quant on laprent.: | Prens demie once deau de fatoto ... [line 31] et cela est | chose bien approuee en plusieurs lieux.; h4, Blank.

VERY RARE. This is a combination of translations of Albertus Magnus' *Liber Aggregationis* and Pliny's *Histoire Naturelle*.

REFERENCES: GW: no. 667. • Pellechet, *Catalogue General des Incunables*, 1970: no. 364.

170. Paris, 1544: Albert le Grant translate de latin en francois. Lequel traicte de la vertu des herbes, des pierres precieuses. Et pareillem^t des bestes & oyseaux. Item est traicte des merueille [!] du monde. et daucuns effectz causez daucunes bestes. Item y est de nouveau adioute vng traicte de Pline. Lequel parle des secrez [!] & merueilles daucue [!] choses naturelles. A Paris en la maison de Nicolas Buffet. 1544.

4^o: a-h⁴; 32ℓ.; [64] p.

VERY SCARCE. Translation of his "Liber aggregationis" and "De mirabilibus mundi", both of which are spurious.

171. Cologne, 1697: Les | Admirables Secrets | D'Albert | Le Grand | contentant plusieurs | Traités sur la conception des | Femmes, & les vertus des Her- | bes, des Pierres precieuses, & des | Animaux avec leurs figures. | Aumentés d'un Abregé curieux de | Phisionomie & d'un Preservatif | contre la Peste, les Fievres mali- | gnes, les Poisons, & l'infection | de l'air. | Tire's & Traduits sur des Anciens | Manuscrits de l'Auteur, qui | n'avoient pas encore Parus. | [ornament] | A Cologne | Chez le Dispensateur des Secrets. | [rule] | 1697.

24^o: π⁴ A-I12 L12 2L12 M-P12 Q8 R11; 202ℓ.; [8], 1-374, [23], [1] blank, engraved title page, woodcut text illus., mostly of animals. PAGE SIZE: 145 x 80 mm. VERY SCARCE.

CONTENTS: [2 pgs], Half title page, engraved, "Les Admirables Secrets, D'Albert le Grand," verso blank; [2 pgs], Title page, verso blank.; [4 pgs], "Avis.": 1-4, "... Preface.": 5-10, "Epitre.": 11-83, Treatise on animals.; 84-151, "Des vertus des Herbes.": 152-190, "Traité des Merveilles du Monde par Albert le Grand.": 191-199, "Petit Traité D'Albert le Grand. Dans lequel on parle de quelques secrets merveilleux & naturels.": 200-259, "Traité des Vertus & Propriétés de plusieurs sortes de sientes.": 260-317, "Traite' De Phisionomie, où l'on connoit le naturel les inclinations des personnes par la diversité des parties du corps.": 318-330, "Les Jours Heureux ou Mal-Heureux.": 331-374, "Le Preservatif des Fievres Malignes.": [14 pgs], "Table des Matieres qui font conteunes dans le Livré des Admirables secrets d'Albert le Grand.": [11 pgs], "Table Exacte & fort utile de la domination des Astres & des Planettes ...": [1 pg], blank.

172. Lyons, 1729: Les Admirables Secrets d'Albert Le Grand contentant plusieurs Traitez sur la Conception des Femmes, des Vertus des Herbes, des Pierres Précieuses et des Animaux augmentéd'un Abrégé curieux de la Phisionomie ... les Poisons et l'infection de l'Air. — Secerts Merveilleux de la Magie Naturelle et Cabalistique, traduit sur l'Original Latin. Lyons, 1729.

2 vols. [VOL 1] 12^o: [VOL 2] 12^o: VERY SCARCE.

REFERENCES: NUC: 7, 276-89 [NA 0141073].

173. Lyons, 1758: Les Admirables Secrets d'Albert Le Grand contentant plusieurs Traitez sur la Conception des Femmes, des Vertus des Herbes, des Pierres Précieuses et des Animaux. Lyons, 1758.

12^o: [12], 312, [10] p., 4 plates. VERY SCARCE.

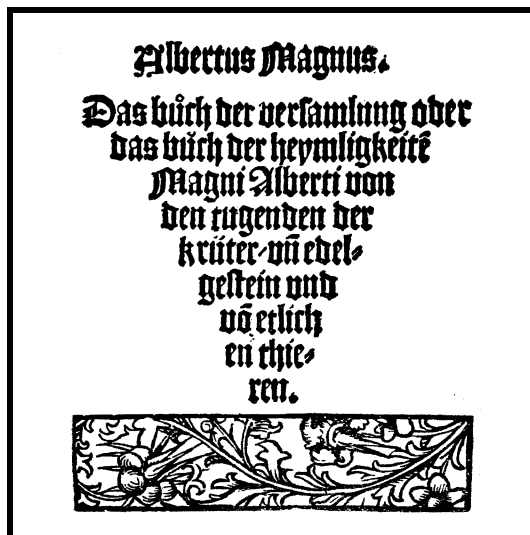
REFERENCES: Adams, *Birth and Development*, 1938: 114-5. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 15-7. • LKG: III. • NUC: 7, 276-89 [NA 0141080]. • Thorndike, *History of Magic*, 1923-58: 2, 545-6. • Wallerius, *Brevi Introductio*, 1779.

174. Lyons, 1791: Les admirables Secrets d'Albert-le-Grand, contenant plusieurs Traités sur la Conception des femmes, des vertus des herbes, des pierres précieuses et des animaux. Augmentés d'un Abrégé curieux de la Physionomie, et d'un préservatif contre la peste [...]. Lyons [Avignon], Chez les Héritiers de Beringos [Offray], 1791 [i.e., vers 1850].

18^o: xx, 203 p., illus.

VERY SCARCE. Rel. 19e: demi-veau brun glacé à coins, dos fleuroné doré à nerfs (rel. usagée, frottée).

Les éditions des Beringos sont en général assez recherchées. Celle-ci, publiée en réalité en 1850, est illustrée de 4 bois à pleine page en noir et de 5 bois rehaussés (sur 3 planches dont 2 dépliantes) et de qqs culs-de-lampe. Le texte est un ramassis de superstitions et billevesées assez amusantes sur la nature des femmes, les vertus des pierres, les animaux et leurs fientes, les métaux, et la physiognomonie. Il se termine par un traité des fièvres (avec recettes). *Bibliotheca Esoterica*, n^o 42. s Provenance: Léon Pape ("Enchiridion Leonis Papae", vignette typographique moderne).



DAS BUCH DER VERSAMLUNG, 1508

German editions

175. Strassburg, 1508: Albertus Magnus. | Das bûch der versammlung oder | das buch der heymlichkeitē | Magni Alberti von | den tugenden der | krüter vñ edel- | gestein vñ | vō etlich | en thie- | ren. 4^o: 36 unnumb. ℓ., ornamental woodcut on the title page.

VERY RARE. Published by Martin Flach in Strassburg in 1508, this is the first German edition of the popular *Liber Aggregationis* containing sections of interest in the history of botany, zoology and mineralogy. It handles descriptions of 16 plants, 46 stones, 18 animals, including influences of the planets and medical recipes. Only a very few early German editions were published, almost all editions being in Latin.

REFERENCES: Taeuber & Weil, Bookseller: "Alte Naturwissenschaften," c1925, no. 115.

176. Franckfurt am Mayn, c1550: Ein Newer Albertus Magnus. Von Weibern vnd Geburten der Kinder sampt jren artzneien. Von tugenten etlicher fürnemer Kreuter. Von kraft der Edlen Gestein. Von Art vnd Natur ettlicher Thier. Mit sampt eim bewerten Regiment für die Pestilentz. Alles von newem gebessert durch Q. Apollinarem. Gedruckt zu Franckfurdt am Mayn, Durch Hermann Gülffrichen [c1550].

4^o: XLV [i.e., XLIV] numb. *l.*, [4] p., illus. Engraved title page printed in red and black with vignettes within an architectural border. Printer's device, tailpieces and initial.

VERY SCARCE. Translation of the author's *De secretis mulierum* and his *Liber aggregationis*, to which are added two anonymous works: *Das funfft Buch von Wassern des Lebens*, and *Das sechst Buch, Ein Regiment, wie man sich in der Zeit der Pestilenz halten sol mit Essen und Trincken*. Cf. *Nat. Lib. Med. Catalogue of sixteenth century printed books*.

Authors : Ryff, Walther Hermann, 16th century.

REFERENCES: Benzing, J., "Walther H. Ryff und sein literarisches Werk," *??????*, ??: 12.

English editions

177. English transl., 1560: [Contained within a woodcut frame consisting of four parts:] The boke | of secretes of Albartus Mag | nus, of the vertues of | Herbes, stones and | certayne beastes. | [ornament] Also, a boke of the same au | thor of the maruaylous th | ges of the world: and o[f] | certayne | effectes, cau | sed of certayne | beastes. | [ornament] | MDXXV.

8^o: A-K⁸ L3; 83*l.*; no pagination.

CONTENTS: A1r, Title page.; A1v, "Syth it is manifesli kno | wen, that ..."; A2r-B8r, "[ornament] The firste boke of the vertues | of certayne Herbes."; B8v-D8r, "On the vertues | magnes, the lode stone. | ..."; D8v, "...Explicit."; E1r-F7r, Text of book of beasts.; F7v:3v, [Of the Marvels of the Worlde].

EXTREMELY RARE. The boke of secretes (known as *Liber aggregationis* or *Liber secretorum de virtutibus herbarum, lapidum et animalium quorundam*) and the Boke of the maruaylous thinges of the world (*De mirabilibus mundi*) are falsely attributed to Albertus Magnus. Cf. *Deutscher Gesamtkat.*

Facsimile reprint, 1969: Albertus Magnus | The Boke Of Secretes | London (1560) | Da Capo Press | Theatrum Orbis Terrarum Ltd. | Amsterdam 1969 New York.

REFERENCES: BL: [b.54.a.10].

178. Another issue, 1560: [Contained within an elaborate woodcut frame showing motifs of plants, animals and people:] The boke | of secretes of Albertus Ma= | gnus, of thevertues of | Herbes, stones, and certayne beastes. | Also, a boke of the sa= | me author of the maruay= | lous thinges of the world: | and of certayne effec= | tes, caused of cer= | taine beastes. | [ornaments] | Anno. M. D. LX.

8^o: EXTREMELY RARE.

ALBIZZI, Ottavio degli. *Italian geologist.*

179. — Italian, 1851.

Elementi di geologia e di mineralogia con figure e quadri illustrativi della costituzione geognostica del globo con la descrizione dei terreni della Toscana per cura e opera di Ottavio degli Albizzi. Firenze, Coi tipi di Pasquale Fioretti, 1851.

8^o: [1]-217 p., 6 plates (2 folded), illus (some colored).

VERY SCARCE. This is a well illustrated elementary textbook of geology and mineralogy with special emphasis on the description of the region around Tuscany.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 23.



ALDROVANDI

ALDROVANDI, Ulysse. (BORN: Bologna, Italy, 11 September 1522; DIED: Bologna, Italy, 10 May 1605) *Italian botanist & natural historian.*

Aldrovandi is regarded as one of the foremost zoologists of the Renaissance. He was born of a respectable burgher family and it was intended he should become a merchant. However, the work attracted him so little he began studying first jurisprudence in Bologna and then philosophy and medicine at Padua and Rome, receiving the degree of Doctor of Medicine in 1552. In 1560, he was appointed professor of natural history at the University of Bologna, where he remained the next 40 years, until his death. As a professor he was a favorite lecturer of the students, and his talks on botany and pharmacology were heavily attended. In order to provide teaching aids for his lectures, he founded in 1568 the Bologna City Gardens and became its first director. About this period, he was also appointed inspector of drugs and as a consequence published, *Antidotarii Bononiensis Epitome* (Bononiae, 1615), which became a model for many subsequent pharmacopædias.

Throughout his adult life, Aldrovandi spent his financial and leisure resources in the accumulation of a very large collection of natural history objects. He employed the artists of the city to create woodcuts of the objects for use in a series of large, beautifully illustrated books, covering the natural history spectrum. However, at his death, only four volumes had been published. Before he died though, the Bologna City government, in recognition of his scientific contributions, had doubled his salary. In gratitude, Aldrovandi bequeathed his collections and unpublished manuscripts to the city, where today the remains are located in the city's library and museum. This was also a shrewd move because after his death, the city decided to continue the publication of the manuscripts. The result is that all of the various researches are embodied in Aldrovandi's *Opera Omnia* (Bononiae, 1599-1668), which consists of 14 large folio volumes, covering all aspects of natural history, and forming one of the great scientific works of the seventeenth century.

REFERENCES: ABI: I 26, 238-304; II 8, 407-422.
 • Adversi, A., "Nuovi appunti su Ulisse Aldrovandi, bibliofilo, bibliotecario e bibliografo, a sulla sua inedita Bibliografia," *Bibliofilia*, 68 (1967), 51-90. • Adversi, A., "Ulisse Aldrovandi: bibliofilo, bibliografe e bibliologo del cinquecento," *Annali, Scuola Speciale per Archivisti e Bibliotecari*, 8 (1968), nos. 1/2, 85-181. • Aldrovandi, U., *Catalogo dei manoscritti di Ulisse Aldrovandi*. Edited by L. Frati, A. Ghigi & A. Sorbelli. Bologna, N. Zanichelli, 1907. xxi, 287 p., portrait. • Baldacci, A., et al., *Intorno alla vita e alle opere di Ulisse Aldrovandi*. Bologna, L. Betrami, 1907. 223 p. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • Capparoni, *Profili Bio-Bibliografici*, 1928-32: 1, 17-20, portrait. • *Catalogue of Portraits of Naturalists*: 106 [18 portraits listed]. • Comitato pel Centenario di Ulisse Aldrovandi, *Onoranze a Ulisse Aldrovandi vel terzo centenario dalla sua morte celebrate in Bologna nei giorni XI, XII, XIII giugno MCMVII*. Inola, 1908. [i]-vi, [1]-429 p., 14 plates. [Collection of commemorative addresses.]. • *Dizionario Biografico Italiano*: 2, 118-24 [by G. Montalenti]. • DSB: 1, 108-10 [by C. Castellani]. • Fantuzzi, G., *Memorie della Vita di Ulisse Aldrovandi medico e filosofo Bolognese*. Bologna, 1774. vi, 263 p. • Frati, *Dizionario Bio-bibliografico Italiani*, 1933. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Lambrecht & Quenstedt, *Catalogus*, 1938: 6-7. • Mieli, *Gli Scienziati Italiani*, 1921: 328-36, portrait, manuscript example. • Olmi, G., *Ulisse Aldrovandi: Scienza e natura nel secondo cinquecento*. Trento, Unicoop, 1976. 129 p. [Published as: *Quaderni di storia e filosofia della scienza*, no. 4.]. • Parenti, *Aggiunte al Dizionario*, 1952-60. • Pattaro, S.T., *Metodo e sistema delle scienze nel pensiero di Ulisse Aldrovandi* Bologna, Cooperativa Libreria Universitaria Editrice, 1981. 251 p. [Published as: *Collana di studi epistemologici*, no. 3.]. • Poggendorff: 1, cols. 27 & 1527. • Sarjeant, *Geologists*, 1980: 2, 411-2. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • Tosi, A., ed., *Ulisse Aldrovandi e la Toscana: Categgio e testimonianze documentarie*. Florence, Olschki, 1989. [1]-472 p., [19] p. of plates, illus. • WBI. • *World Who's Who in Science*: 26.

180. — Latin, 1648 [First edition].

[Contained within an ornamental compartment:]
 Vlyssis Aldrovandi | Patricii Bononiensis |
 Mvsævm Metallicvm | In Libros IIII distribvtvm
 | Bartholomævs Ambrosinvs | in patrio Bonon
 Archigymnasio Simpl. | Med. Professor ordinurius,
 Musei Illustriss.^{mi} | Senatus Bonon. et Horti publici
 Prefectus | Labore, et Studio composuit | cum
 Indice copiosissimo | Marcvs Antonivs Bernia |
 propriys impensis in lucem edidit | ad serenissimvm
 | Rantivm II | Farnesivm | Parmæ placentiæ etc.
 | Dvcem VI. | [At base:] Effodivntvr Opes.

2°: ¶³ A-Z⁶ Aa-Zz⁶ Aaa-Zzz⁶ Aaaa-Nnnn⁶ Oooo⁴
 (402 missigned 4P2); 499ℓ.; [6], 1-979, [13] p., engraved
 title page, many woodcuts in text, printer's devices,
 capital letters. Although no date appears on the title
 page, the last page has the colophon: "Bononiæ, Typis
 Io. Baptistæ Ferronij 1648." PAGE SIZE: 350 x 236 mm.

CONTENTS: [2 pgs], Title page, verso blank; [2 pgs],
 "Serenissime Princeps."; [1 pg], "Bartholomævs Ambrosinvs
 Bebeuolo Lectori S."; [1 pg], "Mvsæum hoc Metallicum
 Magni Vlyssis Aldrovandi Patricii Bononiensis Mvsæi
 Metallici Liber Primvs. Ordinis Ratio."; 206-272, "... Lib. II. De Terra in Genere."; 273-
 434, "... Liber Tertivs. De Svccis Concretis."; 435-979, "...
 Liber IV. De Lapidibvs in Genere."; [13 pgs], "Index Rervm
 & Verborum locupletissimus."

VERY SCARCE. Edited by Bartolomeo Ambrosini



MVSAEVM METALLICVM, 1648.

[see note below]. Some forty years after he died, Aldrovandi's *Musaeum Metallicum* was published as a thick folio volume. Since his death, the work had existed as a manuscript, "Geologica ovvero Fossilibus" in the library collections of the University of Bologna, which had been bequeathed all of Aldrovandi's manuscripts. Even unpublished, many scholars studied it as a resource for their own researches. The value others placed upon Aldrovandi's material did not go unnoticed, which is why a former student of the author, Bartolomeo Ambrosini was entrusted by the Bologna senate to edit the material Aldrovandi had accumulated and oversee its publication. The final product is a superb book.

The work consists of a single volume divided into four books: on metals, earths, succi concreti (concrete juices), and stones (minerals, rocks, and fossils). Within each of these books, whole chapters are devoted to the consideration of a single "fossil." In a style typical of its time, each chapter then describes the fossil's medical properties, synonyms, localities, origins, varieties, and uses. Aldrovandi includes references to classical and medieval authors through out the volume in a fashion that anticipated modern scholars by compiling long lists of authorities but omitting those commonly cited (Partington, 1961-70). The antiquarian nature of the book commonly gives the names and descriptions of the items listed a strange, unrecognizable character.

However, Foresti (1887) attempted to ease the struggle by matching relatively modern names to Aldrovandi's. The comprehensive index included at the end of *Musaeum Metallicum* also makes this a reader friendly book.

Perhaps the most outstanding feature for the connoisseur of mineralogic literature are the several hundred woodcuts scattered throughout the volume. Some of these are full page but most are smaller, with many possessing a quaint, interesting character. These figures are designed to illustrate features described in the text, but since minerals do not easily lend themselves to illustration, the pictures "rather require the text to explain them" (Adams, 1934). That Aldrovandi was a man of accumulation is clearly shown by his inclusion of all facts that came to his attention without apparently any critical faculty to distinguish between the true and imaginary, the important and nonessential. A great amount of scientific value is contained in *Musaeum Metallicum* but an overburden must be removed to discover those nuggets. In truth, the author was a product of his time. The influence of the church and other authorities did not bind his writings and ideas as they had past authors, "and so," as Adams (1934) writes, "one gathers the impression that he was writing at the opening of a new age ..."

Bartolomeo Ambrosini. (BORN: 1587; DIED: 1688) *Italian physician & botanist.* Ambrosini was a pupil of Aldrovandi, who successively became professor of philosophy, botany and medicine at the University of Bologna. He also became director of that city's botanical gardens.

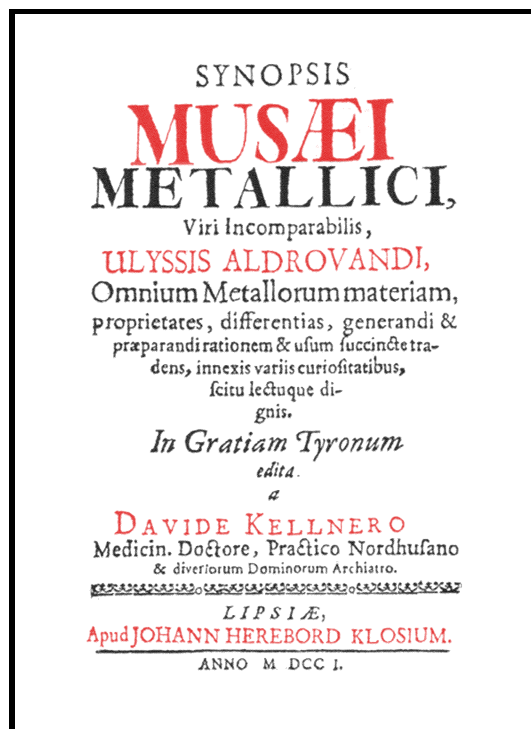
REFERENCES: Adams, *Birth and Development*, 1938: 165-8. • BL: [459.b.7.]. • BMC: 1, 27. • CBN: 2, col. 58. • Cobres, *Deliciae Cobresianae*, 1782: 1, 161-4. • Foresti, L., *Sopra alcuni fossili illustrati e descritti nel Musaeum Metallicum di Ulisse Aldrovandi*, 1887, 1881: 1887, 81. • Freiesleben, *Sächsisches Mineralien-Verzeichnisse*, 1828: no. 2. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 41. • Mieli, *Gli Scienziati Italiani*, 1921: 328-36. • NUC: 8, 44-7 [NA 0154101]. • Partington, *History of Chemistry*, 1961-70: 2, 92-4. • Roller & Goodman, *Catalogue*, 1976: 1, 25. • Schröter's *Journal für die Liebhaber*: 1, 3 & 385. • Sinkankas, *Gemology Bibliography*, 1993: no. 72. • Ward & Carozzi, *Geology Emerging*, 1984: no. 43. • Wilson, *History of Mineral Collecting*, 1994: 19, 27-8, 158 & 201. (Ambrosini) ABI: I 40, 215-218; II 14, 315. • *Biographie Universelle*: 1, 572 [by Chaussier & Adelon]. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzetti, *Repertorio di Tutti i Professori*, 1848. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • WBI. • *World Who's Who in Science*: 42.

181. Abridged edition, 1701: [In black:] Synopsis | [in red:] Musæi | [in black:] Metallici, Viri Incomparabilis, | [in red:] Ulyssis Aldrovandi, | [in black:] Omnium Metallorum materiam, | proprietates, differentias, generandi & | præparandi rationem & usum succincte tra- | dens, innexis variis curiositatibus, scitu lectuque di- | gnis. | In Gratiam Tyronum | edita. | à | [in red:] Davide Kellnero | [in black:] Medicin. Doctore, Practico Nordhufano | & diveriorum Dominorum Archiatro. | [ornate rule] | Lipsiæ, | [in red:] Apud Johann Herebord Klosium. | [in black:] [rule] | Anno M DCC I.

12°: π² A-K¹² L⁹; 131ℓ.; [4], [1]-258 p. Title in red and black. PAGE SIZE: 128 x 75 mm.

CONTENTS: [2 pgs], Title page, verso "Deo | & | Amicis."; [2 pgs], "Lectori Curioso & Benevolo | S.P.D."—signed David Kellner, M.D.; 1-258, Text.

RARE. Edited, paraphrased, abridged edition by



SYNOPSIS MUSÆUM METALLICUM, 1701

David Kellner [see note below] of *Mvsaevm Metallicvm* (Bononiæ, 1648). The work is divided into two books. The first (page 1-67) is "De Metallis in genere," which gives an overview of metals, their origins, reason for existence, etc. The second book (pages 68-258), titled "De Metallis in specie," gives detailed descriptions of various metals, including notes on the both the physical and mystical properties.

David Kellner. (BORN: Gotha, Germany, 16—; DIED: 17—) *German physician.* Kellner studied medicine in Helmstedt, receiving his M.D. in 1670 (or 1673). He worked in Nordhausen, and may have been a physician to the court. The second of his surgical dissertations is dedicated to Johann Langguth, a physician in the service of Duke Ernst of Saxony. It is possible that Langguth advanced Kellner in his work. He dedicates one of his books to Johann Scheib, the surgeon and barber of Gotha (the prince's city of residence) whom Kellner calls his friend and patron. He authored several treatises concerning mining, assaying and metallurgy.

REFERENCES: BL: [977.a.25.]. • BMC: 1, 27. • CBN: 2, col. 58. • Freiesleben, *Sächsisches Mineralien-Verzeichnisse*, 1828: no. 2. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 41. • NUC: 8, 44-7 [NA 0154125]. • Wilson, *History of Mineral Collecting*, 1994: 201. (Kellner) Hirsch, *Biographisches Lexikon*, 1884-8: 3, 499. • Jöcher, *Gelehrten-Lexikon*, 1750-51: 2, 2059-60. • Jöcher, *Gelehrten-Lexikon, Supplement*: 3, 187-8. • Poggendorff: 1, col. 1240.

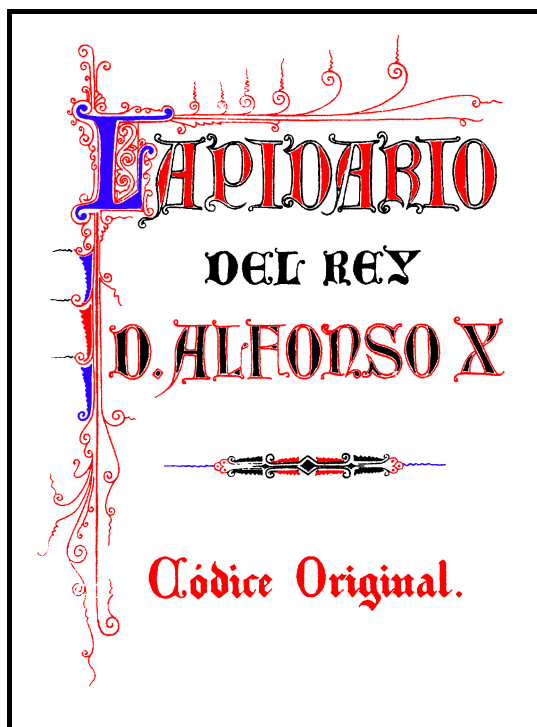
ALFONSO X. (BORN: Burgos, Spain, 23 November 1223; DIED: Sevilla, Spain, 4 April 1284) *Spanish monarch.*

Alphonso X was son of Ferdinand III and Queen Beatriz. He ruled as King of Castilli and Leon from 1252 to 1284. An interest in science and literature caused him to establish a school for Muhammad al-Rîquti, and he completed the incorporation of the University of Salamanca

ALLAN

in 1254. He continued a campaign against the Moors, capturing Cadiz in 1262. Through his sponsorship, a translation of Old Testament was prepared by Jews of Toledo and the first history of Spain written. His policies were a catalyst in bringing Arabic knowledge to Europe. A crater on the moon was named "Alphonsus" in his honor.

REFERENCES: Poggendorff: 1, col. 30. • *World Who's Who in Science*: 29.



LAPIDARIO DEL REY, 1881

182. — Spanish, 1881.

Lapidario | Del Rey | D. Alfonso X. | [ornate rule] | Códice Original.

4^o: [i]-[ii], 1l., [iii]-xx, [12] p., 118l., 14l., [1]-76 p., colored initials and drawings. Ornate colored title page. Published by, Madrid, Imprenta de la Iberia, a Cargo de J. Blasco, 1881. PAGE SIZE: 300 x 210 mm.

CONTENTS: [i-ii], Blank, verso "Madrid | [rule] | Imprenta De La Iberia, A Cargo De J. Blasco | Calle De Lope De Vega, Núms. 23 y 25 | 1881."; 1 l., Reproduction of the manuscripts title page, verso blank; [iii]-xx, "Prólogo. | [rule] | D. José Fernandez Montaña Presitero, A Los Leerñn."; [5 pgs], "Informe | De La | Real Academia De La Historia."—signed Aureliano Fernandez-Guerra & Pedro De Madrazo, 31 September 1879.; [1 pg], Blank.; [4 pgs], Reproduction of a letter dated 2 April 1883.; [2 pgs], Blanks.; 118 l., Color reproduction of leaves from the manuscript.; 14l., Continuation of reproduction of manuscript.; [1]-58, "Del Signo De Aries."—being a description of each of the signs of the zodiac in reference to the text of the manuscript.; [59]-76, "Sobre Las Faces De Los Signos."

SCARCE. Photographic reproduction of an illuminated manuscript prepared in 1278 on the

command of King Alfonso X of Spain. The original is in the collection of the San Lorenzo Library in Escorial, Madrid. In the preface, José Fernandez Montana gives observations on the original manuscript and the sources of its information.

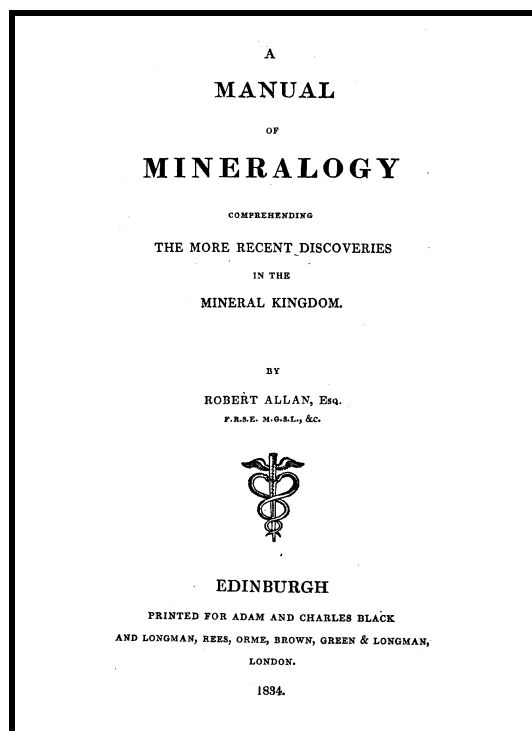
Facsimile reprint, 1970: *Alfonson X ... Lapidario. Texto ...* María Brey Mariño. Segunda Edición. [Madrid]: Editorial Castalia, 1970. 8^o: xxx, [2], 275, [6] p., figs., paper wraps.

REFERENCES: BL: [MS.Facs.222.]. • *Connoissur Magazine*: 31-6 [Contains a description of the original manuscript.]. • Evans, *Magical Jewels*, 1922: 41-50. • Roller & Goodman, *Catalogue*, 1976: 1, 27. • Sinkankas, *Gemology Bibliography*, 1993: no. 75.

ALLAN, Robert. (BORN: Edinburgh, Scotland, 12 October 1806; DIED: Edinburgh, Scotland, 6 June 1863) *Scottish mineralogist & banker.*

Son of THOMAS ALLAN, Robert received his mineralogical training from WILHELM HAIDINGER and his father. Throughout most of his life, Robert collected minerals on annual excursions at the principal localities of Europe. Eventually, he inherited his father's mineral collection, which he later sold to ROBERT GREG.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 4. • BBA: I 18, 340. • Cleavelly, *World Palaeontological Collections*, 1983: 40. • Embry, *Foreword*, 1977. • Henry, W.C., *Biographical Notice of the Late Robert Allan*. Edinburgh, 1863. [privately published.]. • Livingstone, *Minerals of Scotland*, 2002: p. 54-6, portrait. • Poggendorff: 3, 21. • *Proceedings of the Royal Society of Edinburgh*: 5 (1862-6), 30-2. • WBI.



MANUAL OF MINERALOGY, 1834

183. Original edition, 1834: A | Manual | of | Mineralogy | Comprehending | the most Recent Discoveries | in the | Mineral Kingdom. | By | Robert Allan, Esq. | F.R.S.E. M.G.S.L., &c. | [ornament] | Edinburgh | Printed for Adam and Charles Black | and Longman, Rees, Orme, Brown, Green & Longman, | London. | 1834.

8°: [a]-d⁸ e⁵ A-Y⁸; 213ℓ.; [i]-lxxiii, [1], [1]-351, [1] p., 15 folding plates of crystal drawings. PAGE SIZE: 225 x 140 mm. uncut

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to William Henry.; [iv], Blank.; [v]-x, "Preface."; [xi]-lxii, "Introduction."; [lxiii]-lxxiii, "Synopsis of the Arrangement."; [1 pg], "Errata."; [1]-296, Descriptive mineralogy.; [297]-328, "Appendix."—more species.; [329]-351, "Index."—colophon, p. 351, "Printed by Thomas Allan & Co., Edinburgh."; [1 pg], Blank.; [At end], 15 folding plates of crystal drawings.

SCARCE. An introductory work to mineralogy. The first part covers the terminology of mineralogical science, including specific gravity, hardness, color, transparency, lustre, streak, cleavage & fracture, other external characters, parasitic formation of minerals (i.e., pseudomorphs), chemical composition, and the use of the blowpipe. The second part is a standard descriptive mineralogy, with a section at the end covering the newest species.

REFERENCES: BL: [no copy listed]. • BMC: 1, 29. • Dana's 7th (Bibliography): 65. • NUC: 9, 82. • Roller & Goodman, *Catalogue*, 1976: 1, 29.

184. German transl., 1838: Die Mineralogie. Nach dem neuesten Entdeckungen im Mineralreiche, auf Allgemein fassliche Weise vortragen von Robert Allan ... Deutsche bearbeitet von Carl Hartmann. Quedlinburg, Basse, 1838.

8°: [1]-261, [1] p., folding plate.

RARE. Translation by CARL FRIEDRICH ALEXANDER HARTMANN from *A Manual of Mineralogy* (Edinburgh & London, 1834).

REFERENCES: BL: [no copy listed]. • NUC: 9, 82. • Partsch, *Katalog der Bibliothek*, 1851: no. 38.

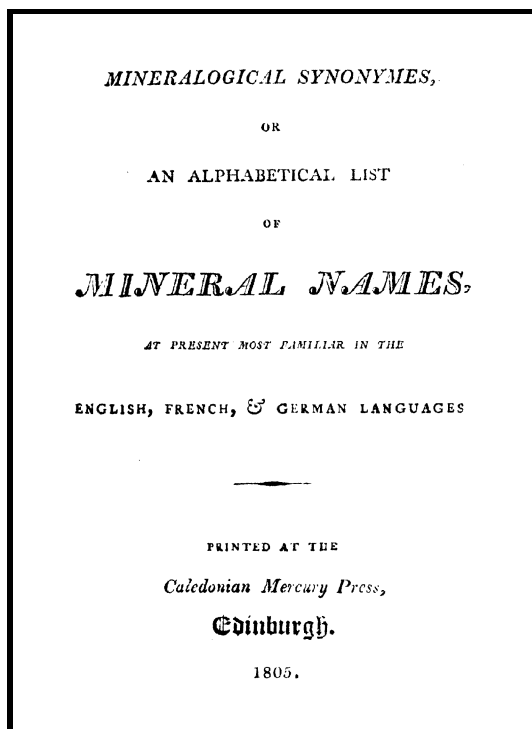
An elementary introduction to mineralogy ... By William Phillips ... Fourth edition ... considerably augmented by Robert Allan ... (London, 1837).

See: Phillips, William.

ALLAN, Thomas. (BORN: Edinburgh, Scotland, 17 July 1777; DIED: Linden-Hall, Northumberland, England, 12 September 1833) *Scottish mineralogist & banker.*

Allan accumulated a large mineral collection that was subsequently bequeathed to his son Robert. This collection was later incorporated into ROBERT GREG's, which is now in the British Museum of Natural History. In 1813, Allan was influential in securing a mineralogy post in the Dublin Philosophical Society for K.L. GIESECKE. Allan wrote "Diamond" for the fifth edition of the *Encyclopedia Britannica*. Allan was elected a Fellow of the Royal Societies of London and Edinburgh. He also recognized a new mineral species from Greenland, which in 1810 was named "Allanite" in his honor by Thomas Thomson.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 4. • BBA: I 18, 345-347. • Cleavelly, *World Palaeontological Collections*, 1983: 40. • DNB: 1, 297. • Farrar, W.V. and K.R. Farrar, "Thomas Allan, mineralogist: an autobiographical fragment," *Annals of Science*, 24 (1968), no. 2, 115-20. • *History of the BM(NH) Collections*: 1904, 1, 412. • Livingstone, *Minerals of Scotland*, 2002: p. 43-7, portrait. • *Philosophical Magazine*, 3rd Series: 3 (1833), 317-8. • Poggendorff: 1, col. 32. • *Proceedings of the Royal Society of London*: 3 (1830-7), 227. • Sarjeant, *Geologists*, 1980: 2, 414. • Thomas, *Dictionary of Biography*, 1884: 101. • WBI.



MINERALOGICAL SYNONYMES, 1805

185. — English, 1805 [First edition].

Mineralogical Synonymes, | Or | An Alphabetical List | Of | Mineral Names, | At Present Most Familiar In The | English, French, & German Languages | [tapered rule] | Printed At The | Caledonian Mercury Press, | Edinburgh. | 1805.

8°: [2], [1]-60, [2] p. PAGE SIZE: 146 x 94 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Notice."—dated 1 June 1805.; [1]-60, Text.; [1 pg], "Errata."; [1 pg], Blank.

EXTREMELY RARE. Published anonymously, but of the same style as Allan's other later works describing mineralogical nomenclature, and therefore attributed to him. The text compares various mineralogical names in the English, French, and German languages. The rarity of this edition suggests that it was a preliminary text, distributed to Allan's colleagues for review and comment.

REFERENCES: BL: [no copy listed]. • NUC: [no copy listed].

186. 2nd edition, 1808: An | Alphabetical List | of the | Names of Minerals, | At Present | Most Familiar in the English, French, | and German Languages, | with | Tables of Analyses. | [double rule] | Printed at the Caledonian Mercury Press, | Edinburgh. | 1808.

8°: [1]-7, [1] errata, [1]-72 p., 17 double leaves of tables. PAGE SIZE: 200 x 125 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-7, Introduction.—signed Edinburgh, July 1, 1808, T. Allan.; [1 pg], Errata.; [1]-72, "Mineralogical Synonymes."; [34 leaves], Double page tables listing the form, specific gravity, analytical researcher, and chemical information for

ALLÉON DULAC

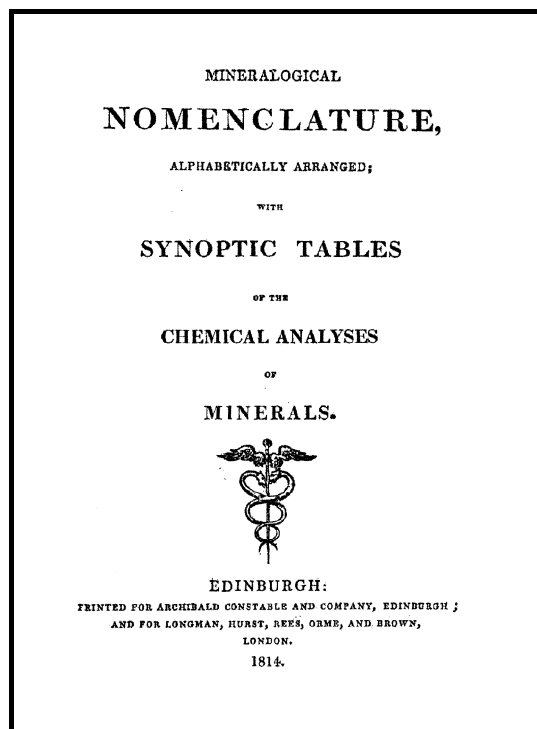
each mineral species.

RARE. Although assigned the title of "First edition" in most bibliographies, this clearly is the second revision after the previous item. The introduction is signed T. Allan. This is one of the earliest attempts in English to compare and clarify the mineralogical nomenclature used by various authors. "As no rules have yet been established, by which mineralogical nomenclature can be regulated, every new work makes a considerable addition to the unwieldy stock of synonymes already in use; and the numerous valuable publications, which have recently appeared on mineralogy, have increased the perplexity arising from this circumstance to such a degree, that the science has been plunged into difficulties, which cannot fail to bewilder, particularly, the young student."—*Introduction*.

In this work, Allan first gives an alphabetical list of the mineral species names used by Kirwan, Jameson, Haüy, Brochant, Lucas and Brongniart. He has then added tables showing the composition of all the minerals that had been submitted to chemical analysis. These tables are divided into four classes I. Saline, II. Earthy, III. Inflammable and IV. Metallic, with the minerals arranged alphabetically within their respective tables.

Apparently two issues of this edition exist. This one, with "Caledonian Mercury Press" imprinted on the title, is not listed in BLC. Instead, they describe an issue with the imprint of "Canterbury Press" on the title page.

REFERENCES: BL: [B.376.(7.)]. • Hoover Collection: no. 46. • NUC: 9, 83.



MINERALOGICAL NOMENCLATURE, 1814

187. 3rd edition, 1814: Mineralogical | Nomenclature, | Alphabetically Arranged; | with | Synoptic Tables | of the | Chemical Analyses | of | Minerals. | [ornament] | Edinburgh: | Printed for A. Constable and Company; | and for Longman, Hurst, Rees, Orme, and Brown, | London. | 1814.

8^o: [a]-c⁴ [A]-G⁴ H² χ^{54} ; 96 ℓ .; [i]-xxii, [1] errata, [1] blank, [54], [2], [1]-4 p., 27 double leaves of tables. PAGE SIZE: 200 x 117 mm.

CONTENTS: [i-ii], Half title page, "Mineralogical Nomenclature," verso blank.; [iii-iv], Title page, verso "Caledonian Mercury Press, Edinburgh."; [v]-xiii, "Introduction"—signed Thomas Allan, 24th Dec. 1814.; [xiv], Blank.; [xv]-xx, "Synopsis of the System adopted in this work."; [xxi]-xx, "Explanation of the List of Synonymes."; [xxiii], "Errata."; [xxiv], Blank.; [54 pgs], "Mineralogical Synonymes."—arranged alphabetically.; [1 pg], "Synoptic Tables of the Analyses of Minerals."; [1 pg], Blank.; [1]-4, "Explanation of the Tables of Analyses."; [54 pgs], 27 double-page tables describing the chemical analyses of 141 mineral species.

SCARCE. The introduction is signed T. Allan. "The idea of this little Work originated in the difficulty I experienced when the study of Mineralogy first engaged my attention. I was then so perplexed with the variety of Synonymous Terms which were indiscriminately made use of, that I was induced to frame a small manuscript vocabulary to assist my memory. This was afterwards committed to the press; and since that time so great an addition has been made, not only to the number of known minerals, but to the original stock of names, that a work of this kind requires to be renewed, were it only to keep pace with the alterations which time has introduced." (Preface).

REFERENCES: BL: [958.e.21.]. • BMC: 1, 29. • Dana's 7th (Bibliography): 65. • NUC: 9, 83. • Roller & Goodman, *Catalogue*, 1976: 1, 29.

188. 4th edition, 1819: Mineralogical | Nomenclature, | Alphabetically Arranged; | with | Synoptic Tables | of the | Chemical Analyses | of | Minerals. | [ornament] | Edinburgh: | Printed for A. Constable and Company, Edinburgh; | and Hurst, Robinson and Company, Cheapside, | London. | 1819.

8^o: [a]-b⁴ c² A-G⁴ χ^{26} ; 64 ℓ .; [i]-xx, [50], [2], [1]-4 p., 51 tables, [1] p. PAGE SIZE: 210 x 128 mm.

CONTENTS: [i-ii], Half title page, "Mineralogical Nomenclature," verso blank.; [iii-iv], Title page, verso "Caledonian Mercury Press, Edinburgh."; [v]-xi, "Introduction"—signed T. Allan, 19th January 1819.; [xii], Blank.; [xiii]-xviii, "Synopsis of the System adopted in this work."; [xix]-xx, "Explanation of the List of Synonymes."; [50 pgs], "Mineralogical Synonymes."; [1 pg], "Synoptic Tables of the Analyses of Minerals."; [1 pg], Blank.; [1]-4, "Explanation of the Tables of Analyses."; [51 pgs], Tables describing the chemical analyses of 141 mineral species; [1 pg], Blank.

SCARCE. The introduction is signed T. Allan. "In offering a Third Edition to the public, I have only to observe, that there is very little alteration made on the former—farther than the progress of the science has suggested—by the addition of new names and analyses. I have adopted the same system as before, arranging all the leading articles in alphabetical order in the list of names, while the chemical tables are contrived to exhibit a synoptic arrangement of the system." (Introduction).

REFERENCES: BL: [B.374.(10.)]. • Roller & Goodman, *Catalogue*, 1976: 1, 29.

ALLÉON DULAC, Jean Louis. (BORN: 1723; DIED: 1768) *French naturalist*.

Alleon-Dulac was a village postmaster in the region of Lyonnais in France. He was in his personal time an active amateur naturalist.

REFERENCES: ABF: I 13, 179-180. • Beauchamp, *Biographie Moderne*, 1816. • *Nouvelle Biographie Générale* (Hofer). • WBI.

189. — French, 1763-5.

Mélanges d'Histoire Naturelle par M.A.D. Lyon, Chez Benoît Duplain, 1763-5.

6 vols. [VOL 1] 8°: a⁸ A-Ee⁸ Ff⁴; 236ℓ.; xvi, 456 p., one plate. [VOL 2] 8°: a⁸ A-Ff⁸ Gg⁴; 245ℓ.; xv, 471, [4] p., 4 plates. [VOL 3] 8°: π⁶ A-Ff Gg²; 240ℓ.; xii, 467 p., 3 plates. [VOL 4] 8°: π⁴ A-Ff⁸ Gg⁴; 240ℓ.; viii, 472 p., 2 plates. [VOL 5] 8°: a⁴ A-Hh⁸ Li²; 256ℓ.; xii, 500 p. [VOL 6] 8°: a⁴ A-Kk⁸ Ll⁶; 274ℓ.; viii, 536, 4 p., one plate.

RARE. Alléon Dulac's *Mélanges d'Histoire Naturelle* (Mixtures of Natural History) is a collection of papers and researches about all facets of natural history that appeared in journals and as separate publications or were read in various Academies of Europe. It is a true menagerie of hundreds of articles on all manner of topics. There are descriptions of all manner of natural objects including fish, birds, plants, minerals, metals, etc. Only volume two is dated 1763, all others are 1765.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, p. 46. • BL. • *Katalog Bergakademie Freiberg*, 1879: p. 166 [V. 376.]. • LKG: VI 38. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 30.

190. — Latin, 1765.

Memoires pour servir a d'Histoire Naturelle des Provinces de Lyonnais, Foretz et Beaujolois. Lyon, 1765.

2 vols. [VOL 1] 8°: xl, 384 p., illus. [VOL 2] 8°: 319 p., illus.

RARE. *Memoires on the Natural History of Lyonnais, Forez and Beaujolois* is apparently an abstract of the author's *Mélanges d'Histoire Naturelle* (Lyon, 1763-5).

Facsimile reprint, 1975: *Mémoires pour servir à l'histoire naturelle des provinces de Lyonnais, Forez et Beaujolois*. Roanne, Horvath, 1975. 2 vols.

REFERENCES: BL. • *Katalog Bergakademie Freiberg*, 1879: p. 166 [IX. 1021.]. • LKG: XIV 379. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 30.



ALLIONI

ALLIONI, Carlo. (BORN: Piemont, Italy, 1725; DIED: 28 July 1804) *Italian physician.*

Allioni graduated with an M.D. in 1747 and opened a medical practice in conjunction with his duties as professor of botany at the University of Turin. He was elected a member of many prestigious European academies and first treasurer, from 1801, of the Academy of Sciences of Turin.

His prime notoriety however was tied to his botanical studies with his *Flora Pedemontana* being his greatest work.

REFERENCES: ABI: I 34, 67-77. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 110 [4 portraits listed]. • *Dizionario Biografico Italiani*. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, col. 32. • WBI.

ORYCTOGRAPHIÆ PEDEMONTANÆ

SPECIMEN,

EXHIBENS CORPORA FOSSILIA
TERRÆ ADVENTITIA:

Auctore CAROLO ALLONIO, Ph. &
Med. Doct. & Societate Physico-Bota-
nicâ Florentinâ, & Academiâ Regiâ
Matritensi.



PARISIIS;

AD RIPAM AUGUSTINORUM;

Apud Claudium-Joannem-Baptistam BAUCHE, Biblio-
polam, ad insigne sanctæ Genovesæ & sancti Joannis
in deserto.

M. DCC. LVII.

Cum privilegio & approbatione.

ORYCTOGRAPHIÆ, 1757

191. — Latin, 1757.

Oryctographiæ | Pedemontanæ | Specimen, |
Exhibens corpora Fossilia | terræ adventitia: |
Auctore Carolo Allionio, Ph. & | Med. Doct.
è Societate Physico-Bota- | nicâ Florentinâ, &
Academiâ Regiâ | Matritensi. | [ornament] |
Parisiis, | Ad Ripam Augustinorum; | Apud
Claudium-Joannem-Baptistam Bauche, Biblio- |
polam, ad insigne sanctæ Genovesæ & sancti
Joannis | in deserto. | [double rule] | M. DCC.
LVII. | Cum privilegio & approbatione.

8°: A-F⁸; 48ℓ.; [i]-viiij, [1]-82, [6] p. PAGE SIZE:
196 x 120 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv,
"Præfatio."; v-vij, "Elenchus Auctorum | qui citantur."; viij,
"Approbatio."; [1]-82, Text.; [2 pgs], "Index Locorum
| præcipuorum, quibus corpora marina | fossilia collecta
sunt."; [4 pgs], Publisher's list.

SCARCE. An early description of the marine fossils and some minerals found in the Piemonte region of north-west Italy, which borders France and Switzerland. In the preface, Allioni explains that he has collected

ALTH

a considerable number of objects in the region and in this work he will describe them. He includes a list of authorities cited in his descriptions and an index to the described fossils and minerals.

REFERENCES: BL: [953.d.3.]. • BMC: 1, 29. • LKG: XIV 639.

ALOPAEUS, Samuel. (BORN: 1721; DIED: 1793) *Finnish theologian.*

Alopaesus was a minister in Sordawala, Finland, when it was a part of the Russian empire.

REFERENCES: *Finsk Biografisk Handbok*: 1, cols. 71-2. • SBA: Scandinavian Biographical Archive: B-008, 124-126 & B-391, 333-336. • WBI.

192. — German, 1787.

Kurze Beschreibung : der in russisch-kaiserl. Carelien befindlichen Marmor- und andern Steinbrüchen, Berg- und Steinarten. Von Samuel Alopäus, Präpositus und Pastor zu Sordawala. St. Petersburg, Gedruckt bey Johann Karl Schnoor, 1787.

8°: 64 p.

VERY RARE. This is a short description of the marbles, quarries, mines and other stone works found around St. Petersburg. The book was published simultaneously in Russian.

REFERENCES: BL: [970.e.5.]. • LKG: XIV 762. • Puzuirevski, *Katalogia Bibliotekia*, 1867: no. 696.

193. Russian transl., 1787: Краткое описание мраморных и других каменных ломов, гор и каменных пород находящихся в Российской Карелии сочиненное Самуилом Алопеусом пастором в Сордавале. St. Petersburg, Shchnora, 1787.

8°: 86 p.

VERY RARE. The book was published simultaneously in German.

REFERENCES: BL: [no copy listed]. • LKG: XIV 763a. • Puzuirevski, *Katalogia Bibliotekia*, 1867: no. 691. • Sopikov, *Essay in Russian Biography*, 1904-8: no. 7621. • *Svodnyi Katalog Russkoï Knigi*: no. 100.



ALPINI

ALPINI, Prospero. (BORN: Marostica, Italy, 23 November 1553; DIED: Padova, Italy, 6 February 1616) *Italian physician.*

Alpini graduated with a medical degree from the University of Padova, and became from 1580 to 1584 a

doctor in the city of Cairo in Egypt. He returned to Venice becoming a reader in botany at the local university.

REFERENCES: *Catholic Encyclopaedia*. • *Encyclopaedia Britannica*, 11th edition. • Internet search.

194. — Latin, 1735 [First edition].

Prosperi Alpini, | [...4 lines of titles and memberships...] | *Historiæ Aegypti Naturalis* | Pars Prima. | Qua continentur | *Rerum Aegyptiarum* | Libri Quatuor. | Opus Postumum | Libri Quatuor. | Opus Postumum | Nunc Primum | Et auctoris Autographo, diligentissime recognito, editum; at- | que ex codem Tabellis Aeneis XXV. Illustratum | & uberrimo Indice auctum. | [ornament] | Lugduni Batavorum, | Apud Gerardum Potvliet. | MDCCXXXV.

2 vols. [VOL 1] 4°: [18], 1-248, [12] p., plates. [VOL 2] 4°: [10], 1-306, [26] p., plates. (102 plates total). Title in red and black.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [8 pgs], Dedication to Joanni Emo.; [4 pgs], "Prosper Alpini | Benevolo Lectori."; [4 pgs], "Index Capitum" (=table of contents); 1-248, Text.; [12 pgs], "Index | Rerum Memorabilium."

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], Sectional title page, "Prosperi Alpini | Aegypti | *Historiæ Naturalis* | Tomus Posterior."; [1 pg], Blank.; [3 pgs], Dedication to Joanni Mauroceno.; [1 pg], "Lectori Optimo."; [2 pgs], "Iclitæ | Nationi | Germanæ."; 1-148, Text.; [149], Sectional title page, "Joannis Veslingii | Mindani | [...3 lines...] | De | Plantis Aegyptiis | Observationes Et Notæ | Ad | Prosperum Alpinum."; [150], Blank.; 151-153, Dedication to Nicolao Contareno.; [154], "...V.C. | Jo. Veslingii."; [155]-[156], Page in Greek.; 157-216, Text.; [217], Sectional title page, "Joannis Veslingii | Mindani."; [218], Blank.; [219]-[221], Dedication.; [222]-[225], "Joannes Veslingius | Lectori Suo S." (=preface); [226], Laudatory poem.; [227]-306, Text.; [2 pgs], "Noi Reformatore del Studio di | Palos."; [14 pgs], "Index | Rerum..."; [10 pgs], "Index Secundus, | Sive | Index."

VERY SCARCE. Alpini's *Rerum Aegyptiarum* contains in the first volume, "a pioneer and undeservedly neglected contribution to Egyptology. Edited after Alpini's death by Bartolomeo Cellari, it contains a wealth of information on the natural history (including zoology and mineralogy), customs, and ancient monuments of Egypt" (DSB). The second volume contains Alpini's work on the plants of Egypt that first appeared in 1592. It is a pioneer study of Egyptian flora which introduced exotic plants to European botanical circles. The editor used the 1640 edition, which was annotated by Johann Vesling [1598-1649].

REFERENCES: BL: [982.d.25.]. • *Cleveland Herbal & Botanical Collections*, 1992: no. 378. • Nissen (BBI): 20. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 113. • Roller & Goodman, *Catalogue*, 1976: 1, 31. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 188.

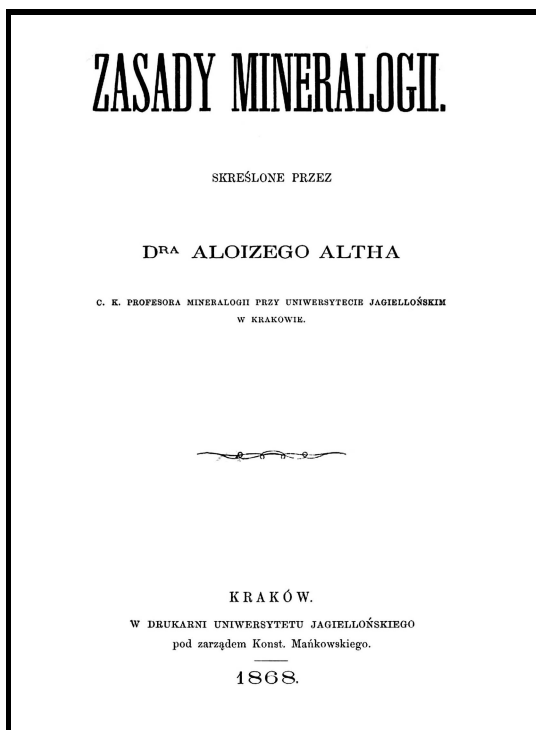
ALTH, Alojzy. (BORN: Czernszowka, Poland, 2 June 1819; DIED: Krakau, Poland, 4 November 1886) *Polish geologist, paleontologist & mineralogist.*

In 1841, Alth recieved his Ph.D. in mineralogy. From 1862, he was professor of mineralogy at the University of Krakau. Member of many scientific societies.



ALTH

REFERENCES: Orgelbranda, *Encyklopedia Powszechna*, 1898-1912: 1, 200, portrait. • PBA: *Polskie Archiwum Biograficzne*: 4, 49-52. • Poggendorff: 3, 24-5. • *Polski Słownik Biograficzny*: 1, 82-3 [by S. Kreutz]. • Sarjeant, *Geologists*, 1980: 2, 417. • WBI.



ZASADY MINERALOGII, 1868

195. — Polish, 1868.

Zasady Mineralogii. | Skreślone Przez |
Dra Alojzego Altha | [...2 lines of titles and
memberships...] | [ornate rule] | Kraków. | W
Drukarni Uniwersytetu Jagiellońskiego | pod
zarządkiem Konst. Mańkowskiego. | [short rule] |
1868.

[TITLE OF ATLAS:]

Atlas | XII tablic do dzieła | Zasady Mineralogii
| Dra Alojzego Altha | c.k. Professors przy
Uniwersytecie Jagiellońskim. | [rule] | [rule] |
Kraków. | [rule] | Lit. Czasu. M Salba w Krakowie.

[Text] 8°: [2], [i]-x, [1]-789 p., illus. [Atlas] 2°:
[2] p., 12 plates (crystal drawings).

CONTENTS: [Text] [2 pgs], Title page, verso blank.; [i]-
vi, "Przedmowa" (=preface).; [vii]-x, "Spis Przedmiotów"
(=table of contents).; [1]-752, Text.; [753]-776, "Spis"
(=index of mineral species).; [777]-782, "Omyłki."; [783]-
786, "Pomyłki Druku."; [787]-789, "Pomyłki."

[Atlas] [2 pgs], Title page, verso blank.; 12 plates.

RARE. This "Basic Mineralogy" contains discus-
sions on various aspects of mineralogy, including lit-
erature, history, terminology, physical crystallography,
and the physical and chemical qualities. The descrip-
tive mineralogy is divided into five classes. An index of
mineral species is included at the end.

REFERENCES: BL: [no copy listed]. • Fleszarowa,
Bibliografia Geologiczna Polski, 1966: 1 (2), no. 33. • Internet
search. • *Verhandlungen Geologischen Reichsanstalt*, Wien:
69-70 [by F. Kreutz].

ALVARADO Y DE LA PEÑA, Santiago.

196. — Spanish, 1832.

El Reino Mineral, | ó sea | La Mineralogia En
General | y en particular | De España. | Obra
en que se describen todos los minerales, piedras |
preciosas, y cuantas curiosidades eucierra la natu-
raleza; con sus aplicaciones á las ar- | tes, la
industria y el comercio; todo segun el esta- | do
actual de nuestros conocimientos en la ciencia: |
con una descripcion exacta | de todas las minas,
piedras preciosas y baños minerales de | España;
sitios donde se hallan su estado y productos, vir- |
tudes medicinales de las aguas, su análisis químico,
tempera- | tura, enfermedades que curan, tiempo
que están abiertos los | baños, su distancia de
Madrid, y cuanto hay que saberse. | Traducido
Del Francés | Y Recopilado De Las Mejores Y Mas
Selectas | Obras Españolas, | por | Don Santiago
de Alvarado y de Peña, | Autor y Edietor de varias
obras literarias y de | Jurisprudencia. | [ornate rule]
| Madrid. | [tapered rule] | Imprenta de Villaamil,
cale de Jacometrezo, n.º 15. | 1832.

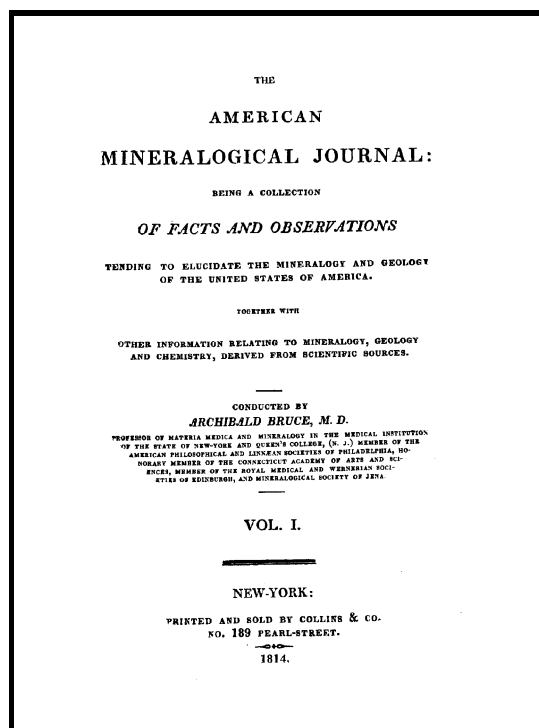
8°: [i]-xvi, [1]-293 p.

VERY SCARCE. The author divided the work
into three parts: (I) Descriptive mineralogy in general
according to the classifications developed by M.J.
Fontenelle and V. Blondeau (pp. 1-146). (II) The
mineralogy of Spain, with particular reference to the
mines of the penninsula (pp. 147-202). (III) Mineral
waters and the minerals found there in, emphasising
those springs found in Spain (pp. 203-272).

Related work: *Diccionario mineralógico y de Historia
Natural de España*. [Madrid, 18—]. No copy located. Cf.
Maffei, 1, no. 56.

AMERICAN MINERALOGICAL JOURNAL

REFERENCES: BL: [726.b.4.]. • Maffei & Rua Figuera, *Bibliografia Mineral*, 1871-2: 1, no. 54. • NUC: 10, 662.
• Palau, *Manual*, 1948-77: 1, 257. • Roller & Goodman, *Catalogue*, 1976: 1, 31.



AMERICAN MINERALOGICAL JOURNAL, 1814

AMERICAN MINERALOGICAL JOURNAL.

197. — English, 1814 [Periodical].

The | American | Mineralogical Journal: | being a collection | of facts and observations | tending to elucidate the mineralogy and geology | of The United States of America. | Together with | other information relating to mineralogy, geology | and chemistry, derived from scientific sources. | [rule] | Conducted by | Archibald Bruce, M.D. | Professor of materia medica and mineralogy in the medical institution | of the state of New-York and Queen's College, (N.J.) Member of the | American Philosophical and Linnæan societies of Philadelphia, Ho- | norary member of the Connecticut Academy of Arts and Sci- | ences, Member of the Royal Medical and Wernerian Soci- | eties of Edinburgh, and Mineralogical Society of Jena. | [rule] | Vol. I. | [double rule] | New-York: | Printed and sold by Collins & Co. | No. 189 Pearl-Street. | [ornate rule] | 1814.

8°: π^3 A-Ll⁴ Mm¹; 138ℓ.; [i]-vi, [1]-270, [2] p., 2 plates, text diagrams. PAGE SIZE: 186 x 120 mm.

CONTENTS: [i-ii], Title page, verso "District of New-York ..."; [iii], "The object of this work is to collect and record | ..."; [iv], Blank.; [v]-vi, "Contents."; [1]-270, Text.; [2] pgs., "Index."

RARE. Edited by Archibald Bruce [see note below], *The American Mineralogical Journal* was the first periodical in America devoted exclusively to scientific subjects. Although its existence was short lived, from 1810 to 1814, it was recognized early in its history to give reliable information about the mineral deposits and recently discovered geological phenomena of America. In 1814 the four issues already published were collected together into a single volume. Then due to Bruce's deteriorating health, publication ceased, although the editor optimistically believed that his *Journal* would someday continue. Unfortunately, he never regained sufficient strength to resume his editorial duties and only after his death in 1818, was his vision realized. This new magazine edited by Bruce's good friend Benjamin Silliman of Yale increased its format to include all forms of science, including mineralogy and geology, and thus became the oracle for nineteenth century American science. The title it took on its debut in 1818 was: *The American Journal of Science, More Especially of Mineralogy, Geology, and the Other Branches of Natural History; Including Also Agriculture and the Ornamental as well as the Useful Arts*.

Facsimile reprint, 1968: The | American | Mineralogical Journal | Conducted by | Archibald Bruce, M.D. | Volume I | (Facsimile of the 1814 Edition) | Introduction by | John C. Greene | University of Connecticut | Forward by | George W. White | University of Illinois | [ornament] | Hafner Publishing Company, Inc. | New York and London | 1968. 8°: [2], [i]-xvii, [2] blanks, [1] portrait of Bruce, [i]-vi, [1]-270, [2] index p. Published as the first volume of *Contributions to the History of Geology*, edited by George W. White.

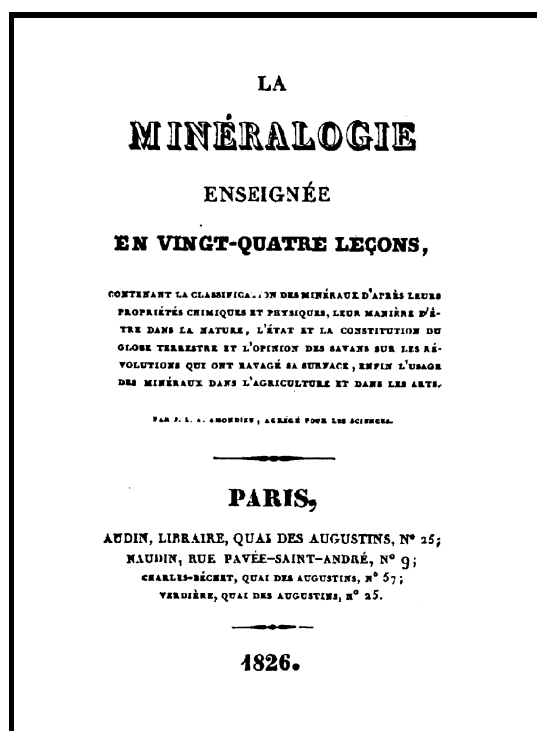
Archibald Bruce. (BORN: New York City, New York, U.S.A., February 1777; DIED: New York City, New York, U.S.A., 22 February 1818) *American chemist & mineralogist*. Bruce's father was head of the medical department of the British Army stationed in New York City. He was educated at a boarding school on Long Island before entering Columbia College in 1791, receiving his A.B. degree in medicine in 1797. One of medical professor's was David Hosack who had returned from Europe with a substantial mineral collection. Soon, Hosack infected Bruce with his enthusiasm for minerals, which quickly became Bruce's favorite leisurely pursuit. In 1798, Bruce sailed for Great Britain to study medicine at the University of Edinburgh. He was awarded the degree of M.D. in 1800, after which he toured France, Switzerland, Italy and England. During this tour, he became acquainted with all of the leading mineralogists of France and England. In 1803, he married in London and returned to America, where he opened a successful medical practice. In 1807, Bruce and several others founded the College of Physicians and Surgeons, now Columbia University's Medical School. In this venture Bruce was a trustee, 1807-11, registrar, 1807-11, professor of mineralogy, 1807-8 and professor of materia medica, 1808-11. In 1812, Bruce and others again founded a new medical school associated with Rutgers. There he was professor of mineralogy and materia medica, 1812-8. He died of apoplexy in 1818. Bruce's mineral collection sold for the large sum (in that time) of \$5,000, which indicates a high quality of specimen. His name is perpetuated by the mineral "Bruceite" named in his honor by F.S. Beudant in 1819.

REFERENCES: BMC: 1, 38. • *Edinburgh Review*: 17, 114-21. • Greene & Burke, *Minerals in the Age of Jefferson*, 1978: 55-9. • LKG: V 42. • Merrill, *History of American Geology*, 1906: 223-4. • White, *Essays on History of Geology*, 1968: vii. (Bruce) *American Chemists & Chemical Engineers*: 2, 33-4 [by W.D. Miles]. • *American Journal of Science*: 1st Series, 1 (1819), 299-304, portrait [by B. Silliman, Sr.]. • Meisel, *American Natural History*, 1924-9: 2, 125-8. • Poggendorff: 1, col. 311.

AMONDIEU, Joseph-Louis-Adrien. (BORN: 1795; DIED:) *French mathematician & naturalist.*

Amondieu was for many years a professor of sciences in colleges throughout France. He edited the proceedings of the learned academy in Nantes and wrote a few textbooks.

REFERENCES: ABF: I 16, 351. • DBF: 2, col. 687 [by M. Prevost]. • WBI.



MINÉRALOGIE, 1826

198. — French, 1826.

La | Minéralogie | enseignée | en Vingt-Quatre Leçons, | contenant la classification des minéraux d'après leurs | propriétés chimiques et physiques, leur manière d'é- | tre dans la nature, l'état et la constitution du | globe terrestre et l'opinion des savans sur les ré- | volutions qui ont ravagé sa surface, enfin l'usage | des minéraux dans l'agriculture et dans les arts. | Par J.L.A. Amondieu, Agrégé pour les sciences. | [ornate tapered rule] | Paris, | Audin, Libraire, Quai des Augustins, N° 25; | Naudin, Rue Pavée-Saint-André, N° 9; | Charles-Béchet, quai des Augustins,

N° 57; | Verdrière, quai des Augustins, N° 25. | [ornate tapered rule] | 1826.

12°: 500 p., 4 plates.

VERY RARE. A standard textbook of mineralogy, divided into 24 lessons. The introductory material covers the usual topics of physical and chemical properties, nomenclature, and classification methods. The descriptive portions classifies the mineral species using a new approach developed by the author. Here Amondieu makes use of the chemical and physical properties of the mineral to classify its species, in an approach that he asserts follows the manner of nature. Considering its popular style approach to the subject this is a suprisingly scarce work.

REFERENCES: BL: [no copy listed]. • NUC: [no copy listed].

ANDERSEN AARS, Ludvig.

199. — German, 1905 [Dissertation].

Ueber die analytische Bestimmung von Beryllium und den sogenannten seltenen Erden, nebst Analysen von Phenakit, Monazit, Euxenit, Hellandit und Uwarovit. Inaugural Dissertation, ... Kristiania, 1905.

8°: 45, [2] p.

RARE. An inaugural dissertation describing the chemical analysis of the element beryllium in the mineral species, phenakite, monazite, euxenite, hellandite, and uvarovite.

REFERENCES: BL: [no copy listed]. • BMC: 6, 1. • NUC: 15, 382.

ANDERSON, Charles. (BORN: Moa, Stenness, Orkney Islands, Scotland, 5 December 1876; DIED: Sydney, Australia, 25 October 1944) *Scottish mineralogist.*

Anderson attended Kirkwall Burgh School and the University of Edinburgh (M.A., 1898, B.Sc., 1900, D.Sc., 1908). He was appointed mineralogist at the Australian Museum, Sydney, 22 July 1908. His doctoral dissertation was on the chemistry and crystallography of minerals from Australia. Anderson was appointed director of the Australian Museum, 14 February 1921, and switched his field of research to vertebrate palaeontology, in which made notable contributions — particularly the reclassification of *Meiolania* (the extinct horned turtle). He held membership in many Australian scientific societies. It is recorded that Anderson had a whimsical sense of humor and simple tastes, and “when measuring crystals on the goniometer, an intricate piece of apparatus, his favorite song was ‘There was a wee cooper who lived in Fife,/Nicketty, nacketty, noo, noo, noo.’”

REFERENCES: *Australian Dictionary of Biography*: 7, 51-52. • *Australian Journal of Science*. • *Australian Museum Magazine*. • Browne, W.R., “Some builders of geology in New South Wales,” *Records of the Australian Academy of Science*, 2 (1971), no. 1.

200. — English, 1916.

New South Wales. | [rule] | Department of Mines. | Geological Survey. | J.E. Carne, F.G.S., Government Geologist. | [rule] | Mineral Resources. | No. 22. | [rule] | Bibliography | of | Australian Mineralogy. | By | C. Anderson, M.A., D.Sc., | Mineralogist

ANDRE

to the Australian Museum. | [By Permission of the Trustees of the Australian Museum.] | 1916. | [ornament] | Sydney: William Applegate Gullick, Government Printer. | [rule] | 1916. | [2s. 6d.]

16°: A-E¹⁶ F²: 82ℓ.; [1]-164 p., bound in printed boards. PAGE SIZE: 244 x 150 mm. VERY SCARCE.

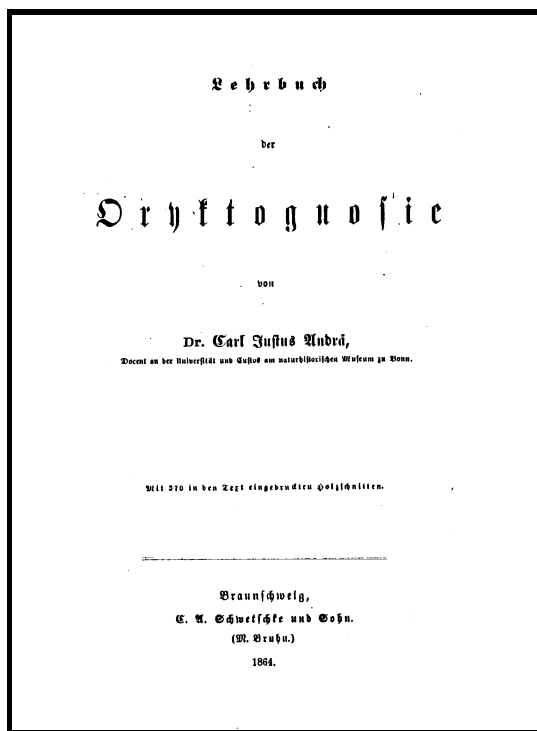
CONTENTS: [1-2], Title page, verso blank.; [3], "Letter of Transmittal."— signed Joseph E. Carne, 7th June, 1916.; [4], "Contents."; [5]-6, "Bibliography of Australian Mineralogy ... Introduction."; 7-58, "List of Papers."; 59, "Australia Generally ..."; 60-85, "New South Wales ..."; 86-101, "Victoria ..."; 102-115, "Queensland ..."; 116-128, "South Australia ..."; 129-144, "Western Australia ..."; 145-162, "Tasmania ..."; 163-164, "Northern Territory ..."

REFERENCES: BL: [07108.k.].

ANDRÄ, Karl Justus. (BORN: Naumberg, Germany, 1 November 1817; DIED: Bonn, Germany, 8 May 1885) *German paleontologist & geologist.*

Andrä began as a private docent, later becoming professor extraordinary in paleontology and geology at the University of Bonn, from which he received his Ph.D. There he also became the custodian of the mineral collection.

REFERENCES: DBA: II 30, 203. • Poggendorff: 3, 28-9. • WBI.



LEHRBUCH DER ORYKTOGNOSIE, 1864

201. — German, 1864.

Lehrbuch | der Oryktognosie | von | Dr. Carl Justus Andrä, | Docent an der Univresität und Custos am naturhistorischen Museum zu Bonn. | Mit 370 in den Text eingedruckten Holzschnitten. |

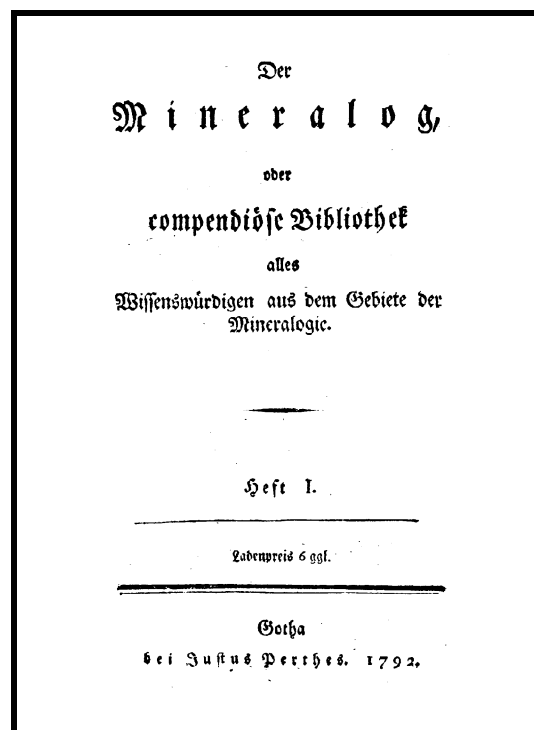
[rule] | Braunschweig, | C.A. Schwetschke und Sohn. | (M. Bruhn.) | 1864.

8°: π⁴ 1-378 385; 305ℓ.; [i]-vii, [1], [1]-602 p., index, 370 illus. PAGE SIZE: 220 x 140 mm.

CONTENTS: [i-ii], Blank, verso series title page, "Lehrbuchs der gesammten Mineralogie," edited by G.F. Gemar.; [iii-iv], Title page, verso blank.; [v]-vii, "Vorwort."; [1 pg], Blank.; [1]-3, "Einleitung."; [4]-578, "Erster Theil. Oryktognosie."; [579]-582, "Anhang. Nachweis der wichtigsten oryktognostischen Werke und solcher Schriften, welche in nächster Beziehung dazu sehen."; [583]-585, "Verbesserungen und Nachträge."; [586]-602, "Register der Mineralien."

SCARCE. A standard textbook of the physical part of mineralogy. The text covers the properties used to determine a mineral's species, followed by a descriptive mineralogy of the most common species, with list of properties, etc. An index to the minerals mentioned concludes the work.

REFERENCES: BL: [7105.aaa.8.].



DER MINERALOG, 1792

ANDRE, Christian Karel. (BORN: Hildburghausen, Germany, 20 March 1763; DIED: Stuttgart, Germany, 19 July 1831) *German mineralogist.*

REFERENCES: ADB. • DBA: I 24, 109-139; II 30, 227-228. • Eitner, *Quellenlexikon*, 1959. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 9. • NDB: 1, 275 [by W. Meinhold]. • Neuer Nekrolog der Deutschen. • Poggendorff: 1, col. 44. • Schrader, *Biographisches Lexicon der Tierärzte*, 1863. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

202. — German, 1792-6.

Der | Mineralog, | oder | compendiöse Bibliothek
| alles | Wissenswürdigen aus dem Gebiete der
| Mineralogie. | [tapered rule] | Heft I. | [rule] |
Ladenpreis 6 ggl. | [double rule] | Gotha | bei Justus
Perthes. 1792.

5 parts. [Part 1: 1792] A-F⁸ G²; 50ℓ.; [1]-100 p.
[Part 2: 1794] A-F⁸ G²; 50ℓ.; [1]-100 p. [Parts 3-5: 1796]
A-S⁸ T⁴ U²; 150ℓ.; [1]-300 p. PAGE SIZE: 170 x 98 mm.

CONTENTS: [Part 1] [1-2], Title page, verso blank.; [3]-
100, Text.

[Part 2] [1-2], Title page, verso blank.; [3], Dedication
to A.G. Werner.; [4], Blank.; [5]-100, Text.

[Parts 3-5] [1-2], Title page, verso blank.; [3]-6,
"Vorerinnerung."; [7]-300, Text.

RARE. Published anonymously but attributed
to Christian Karl André, this is a general textbook
covering all aspects of mineralogical science. It follows
the doctrines of Werner and contains a descriptive
mineralogy with detailed descriptions of common and
rare mineral species.

REFERENCES: *Allgemeine Literatur-Zeitung*: March,
1797, 813. • BL: [no copy listed]. • Gatterer, *Mineralogis-
chen Literatur*, 1798-9: 1, 29. • LKG: VI 108. • *Neue Allge-
meine deutsche Bibliothek*: 15, no. 2, 551 & 19, no. 1, 273. •
NUC: [no copy listed].

203. — German, 1804.

Anleitung zum Studium der Mineralogie, für
Anfänger ... Erste Heft. Wein, Camesinischen
Buchhandlung, 1804.

8°: [30], 3-349, [5] p., one folding plate, one large
folding table.

VERY SCARCE. No more published. This is the first
published part of a proposed thorough introduction to
the study of mineralogy. It is based largely on Werner's
system of external characteristics, but also considers
the chemical constituents and crystal structure of the
minerals. Each mineral species is carefully described
with comments on its hardness, appearance, list of
synonyms, uses in industry, chemical make-up, and
locations around the world where the species is found.

REFERENCES: BL: [726.f.21.]. • LKG: XII 122. • NUC:
[no copy listed].

ANDREAE, Johann Gerhard Reinhard. (BORN:
Hannover, Germany, 17 December 1724; DIED:
Hannover, Germany, 1 May 1793) *German apothecary.*

Andreae undertook a scientific journey from August
to October 1763 through Switzerland. He visited the most
important Alpine areas, where he recorded observations
about the climate, fossils and minerals, saltworks, thermals
baths, and glaciers. Along the way he met many of the
leading Swiss scholars, with whom he continued lengthy
correspondences.

REFERENCES: ADB: 1, p. 447. • *Deutsche Apoth-
eker Biographie*: 1, 8-9. • Meusel, *Verstorbenen Deutschen
Schriftsteller*, 1802-16. • NDB: 1, p. 282-283. • Poggendorff:
1, col. 44.

204. — German, 1769.

Abhandlung über eine beträchtliche Anzahl Er-
darten aus S. Majestät deutschen Landen und von
derselben Gebrauch für den Landwirth auf Befehl

der Kgl. Churfürstl. Cammer dem Dr. übergeben
von Johann Gerhard Reinhard Andreae. Hannover,
Richter, 1769.

8°: xiv, 269, [8] p.

VERY SCARCE. Only appearance of this work
describing different kinds of earth used in agriculture.
He describes the characteristics of 300 different
types, arranged by locality, with information on their
usefulness in the production of alum, gypsum, tobacco
pipes, stoneware, tiles, bricks, and different colors.

REFERENCES: *Katalog Bergakademie Freiberg*, 1879: p.
14 [IX. 434.]. • LKG: XVI 11. • NUC. • Roller & Goodman,
Catalogue, 1976: 1, 37.

205. — German, 1776.

Briefe aus der Schweiz nach Hannover geschrieben,
in dem Jare 1763. Johann G.R. Andreae ... Zweiter
Abdruck. Zürich und Winterthur, bei Joh. Caspar
Fueßli Sohn; und in Commiſſion bei Heinrich
Steiner und Comp. Buchhändlern, 1776.

4°: xxii, 245 (i.e., 345), [1] p., map of Switzerland
on title page, ten engraved figures in text, 18 folding
plates. One large folding engraved plate is signed J.R.
Holzhalf after J.C. Vogler and shows a wooden bridge-
construction closed to Schaffhausen.

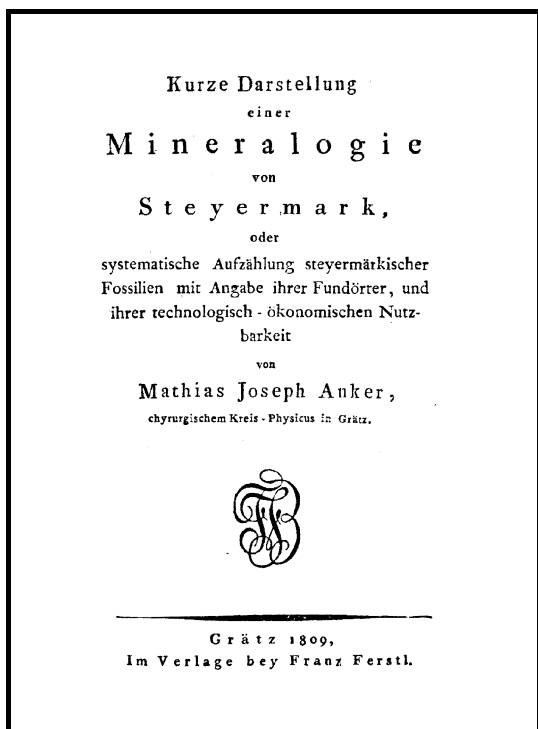
VERY SCARCE. An interesting and beautiful work
that contains a wealth of information on the natural
history of Switzerland. It is the first appearance in book
form of 48 letters first published in the *Hannover'schen
Magazin* that described the trip Andreae made through
Switzerland between August and October 1763, when
he visited several of his pharmacy colleagues and various
natural history collections. Most of the plates depict
fossils, crystals, three are of birds and a few on
landscapes.

REFERENCES: Haller, *Bibliotheca Botanica*, 1771-2: 1,
984. • *Katalog Bergakademie Freiberg*, 1879: p. 14 [IX. 924.].
• LKG: XIV 481. • Lonchamp, F.C., *L'oeuvre imprimé
de Madame Germaine de Staël; description bibliographique
raisonnée et annotée de tous les ouvrages publiés par ses soins
ou ceux de ses héritiers (1786-1821)*. Genève, P. Cailler, 1949.
xi, 125 p., port: p. 117-118. • Studer, *Geschichte Geographie
Schweiz*, 1863.: p. 321-323.

ANKER, Matthias Joseph. (BORN: Graz, Austria, 1
May 1772; DIED: Graz, Austria, 3 April 1843) *Austrian
mineralogist.*

Anker was educated in music, natural science and
medicine. He became a surgeon in Stainz, and was in 1807
appointed district surgeon in Graz, Austria, 1807. There
he became associated in 1811 with FRIEDRICH MOHS of the
Johanneum. Subsequently, Anker was appointed professor
of mineralogy and custodian of the mineral cabinet at
Johanneum. The mineral "Ankerite" was named in his
honor by W. Haidinger in 1825.

REFERENCES: ADB. • DBA: I 27, 11-17; II 33,
205-209. • Hamberger & Meusel, *Gelehrte Deutschland*,
1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. •
Lambrecht & Quenstedt, *Catalogus*, 1938: 9. • NDB: 1,
298 [by E. Krajicek]. • *Österreich Biographisches Lexikon*.
• Poggendorff: 1, col. 49. • WBI. • *World Who's Who in
Science*: 54. • Wurzbach, *Biographisches Lexikon Österreich*,
1856-91.



KURZE DARSTELLUNG, 1809

206. — German, 1809.

Kurze Darstellung | einer | Mineralogie | von |
Steyermark, | oder | systematische Aufzählung
steyerländischer | Fossilien mit Angabe ihrer
Fundörter, und | ihrer technologisch - ökonomischen | Nutz- |
barkeit | von | Mathias Joseph
Anker, | chirurgischem Kreis-Physicus in Grätz. |
[ornament] | [tapered rule] | Grätz 1809, | Im Verlage
bey Franz Ferstl.

8°: π^8)² A-E⁸; 50ℓ.; [i]-xix, [1], [1]-79, [1] p.
PAGE SIZE: 180 x 110 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii],
Dedication to Lyceum in Grätz.; [iv], Blank.; [v]-xiv,
"Geschichtliche Einleitung."—dated April 1808.; xv-xix,
"Alphabetisches Inhalts-Verzeichniss | der in diesem
Bändchen vorkommenden Mi- | neralien."; [1 pg],
"Vorzügliche Druckfehler."; [1]-79, Text.; [1 pg], "Gedruckt
mit Tanzer'schen Schriften."

VERY SCARCE. The text begins with an historical
perspective of mineralogical studies in the Steyermark.
Listed then are the various mineral species found in the
region arranged in a classification scheme, together with
their physical properties and locality information.

REFERENCES: BL. • LKG: XIV 263. • NUC: 17, 212.

ANNALEN DER SOCIETÄT.

See: Jena, Germany. Societät Für Die Gesamte
Mineralogie.

ANSCHÜTZ, Johann Matthäus. (BORN: Suhl,
Germany, 12 April 1745; DIED: Suhl, Germany, 5 June

1802) *German mineralogist & merchant.*

Anschütz was a gun dealer in Suhl. He worked closely
with Werner on developing a mineralogical classification
system.

REFERENCES: ADB: 1, 477. • Lambrecht & Quenstedt,
Catalogus, 1938: p. 11. • Poggendorff: 1, col. 50. • *World
Who's Who in Science*: p. 55.

207. — German, 1788.

Ueber die Gebirgs- und Steinarten des chursäch-
sischen Hennebergs nebst einer allgemeinen Ueber-
sicht aller bis jetzo bekannten Mineralien dieses
Landes und einem Anhang vom Schneekopf
und Kupberg. Ein Resultat fünfundzwanzigjähriger
Beobachtungen und Erfahrungen. Von Johann
Matthäus Anschütz, Gewehrhändlern zu Suhl.
Leipzig, Müller, 1788.

8°: lii, 120 p.

RARE. A description of mines and mineral
resources of Henneberg, Germany, compiled by the
author from 25 years of observations and experiences.
He includes a list of the minerals found in the region.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 88, no.
2, 184. • *Allgemeine Literatur-Zeitung*: (July, 1788), 204.
• Dryander, *Catalogus Banks*, 1796-1800: 4, p. 50. •
Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 107 ["good
and scholarly"]. • *Katalog Bergakademie Freiberg*, 1879: p. 19
[IX. 561.]. • LKG: XIV 108. • NUC. • Roller & Goodman,
Catalogue, 1976: 1, 40.

208. — German, 1798.

Berichtungen und Zusätze zu der Schrift über
die Gebirgs- und Steinarten des chursächsischen
Hennebergs. nebst einem neuen nach Wernerischem
Systeme geordneten Verzeichnisse der Mineralien
dieses Landes. Von Johann Matthäus Anschütz,
Gewehrhändlern zu Suhl. Leipzig, Müller, 1798.

8°: 85 p.

RARE. Based on Werner's system, this work
contains a section titled, "Verzeichnis der Mineralien
des chursächsischen Hennebergs." This work contains
corrections and additions to the author's *Ueber die
Gebirgs- und Steinarten des kursächsischen Henneberg*
(1788), including a new listing of all of the minerals
arranged according to Werner's system.

REFERENCES: *Katalog Bergakademie Freiberg*, 1879: p.
19 [IX. 562.]. • LKG: XIV 109a.

ANSTED, David Thomas. (BORN: London, England,
5 February 1814; DIED: Woodbridge, England, May
1880) *English geologist.*

Ansted was educated at Jesus College under
Sedgwick. He graduated from the University of Cambridge
in 1836. In 1840, he was appointed professor of geology at
King's College, London, which he remained until 1853. In
1850, he became a mining consultant. Ansted was elected a
Fellow of the Royal Society in 1844. He was also a Fellow of
the Geological Society of London. His research investigated
the practical applications of geology to mine engineering
and water supplies.

REFERENCES: Allibone, *Dictionary of English Literature*,
1859-71. • BBA: I 31, 6-14; II 1255, 289. • Boase, *Modern
English Biography*, 1892-1921. • *Catalogue of Portraits of*



ANSTED

Naturalists: 119 [1 portrait listed]. • WBI. • *World Who's Who in Science*: 55.

209. — English, 1850 [First edition].

Elementary course of geology, mineralogy and physical geography. London, John Van Voorst, 1850.

8°: xxvii, 584 p., text illus. VERY SCARCE.

210. 2nd edition, 1856: Elementary course of geology, mineralogy, and physical geography. By Professor David T. Ansted ... Second edition, reissue, with important notes and additions.. London, 1856.

8°: xvi, 606 p., illus. "Glossary of scientific and technical terms used in physical geography, geology, mineralogy, and mining": p. [557]-588. VERY SCARCE.

REFERENCES: BMC: 1, 52. • Roller & Goodman, *Catalogue*, 1976: 1, 40.

211. — English, 1880.

Natural History Rambles. | [rule] | In Search of Minerals. | By | D.T. Ansted, M.A. F.R.S. | Formerly Fellow of Jesus College, Cambridge, | Honorary Fellow and Late Professor of Geology in King's | College London. | [rule] | Published under the Direction of | the Committee of General Literature and Education | appointed by the Society for Promoting | Christian Knowledge. | [rule] | London: | Society for Promoting Christian Knowledge, | Northumberland Avenue, Charing Cross; | 4, Royal Exchange; and 48, Piccadilly. | [rule] | New York: Pott, Young, & Co. | 1880.

8°: π^8 C-T⁸ χ^2 : 146 ℓ .; [i]-vi, [1]-282, [4] p., illus. PAGE SIZE: 164 x 106 mm. SCARCE.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "Contents."; [1]-34, "In Search of Minerals. Chapter I. Minerals and their Homes."; 35-67, "Chapter II. Gems or Precious Stones — The Diamond and Ruby."; 68-91, "Chapter III. Precious Stones, continued.— The Emerald, Zircon or Hyacinth, Topaz, Spinel, Tourmaline, and Garnet Groups."; 92-123, "Chapter IV. Quartz Gems."; 124-155, "Chapter V. The Softer Gems and Valuable Stones."; 156-184, "Chapter VI. Valuable Minerals derived from the Vegetable and Animal Kingdoms: — Jet, Amber, Pearl, Coral."; 185-218, "Chapter VII. Useful Non-metallic Minerals."; 219-247, "Chapter VIII. Native Metals."; 248-267, "Chapter IX. Ores or Minerals yielding Common and Useful Metals.";

268-278, "Chapter X. Useful Minerals being Ores of the less Important Metals."—page 278, under a note to 'Artificial Production of Diamonds,' the date February 24, 1880 is given.; [279]-282, "Index."; [4 pgs], "Publications of the Society for Promoting Christian Knowledge."

REFERENCES: NUC: 17, 555-7.

212. — English, 1855.

Geology, mineralogy, and crystallography: being a theoretical, practical, and descriptive view of inorganic nature, the form and classification of crystals, and a chemical arrangement of minerals. By ... D.T. Ansted ... Prof. Tennant ... and W. Mitchell. London, 1855.

8°: xx, 587 p., one map, illus.

VERY SCARCE. Forms volume IV of Orr's *Circle of the Sciences*. Contains: Physical Geography and Geology by D.T. Ansted. Crystallography and Mineralogy by W. Mitchell and J. Tennant.

REFERENCES: BL: [8706.b.28.]. • BMC: 6, 29.

ANTHONY, John Williams. (BORN: Brockton, Massachusetts, U.S.A., 25 November 1920; DIED: El Paso, Texas, U.S.A., 8 November 1992) *American geologist & mineralogist*.

Anthony began his geology degree at Brown University before World War II. The war intervened, however, and only after his service did he move to Tucson, Arizona, where he earned his B.S. in geology in 1946. This was followed by an M.S. in 1951, and in 1965, a Ph.D. from Harvard University where he studied under CLIFFORD FRONDEL. In 1946, he accepted a position as mineralogist with the Arizona Bureau of Mines, which he retained until 1951. The experience gave him an expert knowledge of the mineralogy of Arizona. From 1951 until 1964 he rose from Assistant to Associate Professor of geology at the University of Arizona. In 1964 he was appointed a full professor at that institution—a position he kept until his retirement in 1983. Anthony held membership in the Mineralogical Society of America, the Geological Society of America, and the American Crystallographic Association. His specialty was the mineralogy and economic geology of the American southwest, as well as experimental and descriptive mineralogy. The mineral species "Anthonyite" was named in his honor by S.A. Williams in 1985.

REFERENCES: *American Men and Women of Science*, 18th edition, 1992-93: 1, 166. • *American Mineralogist*: 79 (1994), 782-4, portrait [by K.W. Bladh].

213. — English, 1990-2003.

Handbook of | Mineralogy | Volume I | Elements, Sulfides, Sulfosalts | John W. Anthony | Richard A. Bideaux | Kenneth W. Bladh | Monte C. Nichols | Mineral Data Publishing | Tucson, Arizona.

[TITLE PAGE OF VOLUME 2, PART 1 READS:]

Handbook of | Mineralogy | Volume II | Silica, Silicates | Part 1 | ...

[TITLE PAGE OF VOLUME 2, PART 2 READS:]

Handbook of | Mineralogy | Volume II | Silica, Silicates | Part 2 | ...

[TITLE PAGE OF VOLUME 3 READS:]

Handbook of | Mineralogy | Volume III | Halides, Hydroxides, Oxides | ...

ANTHONY

[TITLE PAGE OF VOLUME 4 READS:]

Handbook of | Mineralogy | Volume IV |
Arsenates, Phosphates, Vanadates | ...

[TITLE PAGE OF VOLUME 5 READS:]

Handbook of | Mineralogy | Volume V | Borates,
Carbonates, Sulfates | ...

5 vols. [VOL 1: 1990] 8°: [i]-viii, [2], 1-588 p.; [VOL 2, part 1: 1995] 8°: [i]-xiv, [2], 1-446 p.; [VOL 2, part 2: 1995] 8°: [i]-ii, [2], 447-904 p.; [VOL 3: 1997] 8°: [i]-ix, [3], 1-628 p. [VOL 4: 2000] 8°: [i]-ix, [3], 1-680 p. [VOL 5: 2003] 8°: [i]-ix, [3], 1-813 p. PAGE SIZE: 254 x 176 mm.

CONTENTS: [Vol 1] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; iii, "Acknowledgements."; [iv], Blank.; v-viii, "Introduction."; [1 pg], Sectional title page, "Volume I | Elements, Sulfides, Sulfosalts."; [1 pg], Blank.; 1-588, Text [=588 mineral species].

[Vol 2, part 1] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; iii-iv, "Acknowledgements."; v-ix, "Introduction."; x-xiv, "Amphiboles."; [1 page], Sectional title page, "Volume II | Silica, Silicates | Part 1."; [1 pg], Blank.; 1-446, Text [=446 mineral species].

[Vol 2, part 2] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; [1 pg], Sectional title page, "Volume II | Silica, Silicates | Part 2."; [1 pg], Blank.; 447-904, Text [=457 mineral species].

[Vol 3] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; iii-iv, "Acknowledgements."; v-ix, "Introduction."; [1 pg], Blank.; [1 pg], Sectional title page, "Volume III | Halides, Hydroxides, Oxides."; [1 pg], Blank.; 1-628, Text [=628 mineral species].

[Vol 4] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; iii-iv, "Acknowledgements."; v-ix, "Introduction."; [1 pg], Blank.; [1 pg], Sectional title page, "Volume IV | Arsenates, Phosphates, Vanadates."; [1 pg], Blank.; 1-680, Text [=680 mineral species].

[Vol 5] [i]-ii, Title page, verso "... | Library of Congress Cataloging-in-Publication Data | ..."; iii-iv, "Acknowledgements."; v-ix, "Introduction."; [1 pg], Blank.; [1 pg], Sectional title page, "Volume V | Borates, Carbonates, Sulfates."; [1 pg], Blank.; 1-791, Text [=791 mineral species]; 792, Blank.; 793-813, Index.; [1 pg], Blank.

VERY SCARCE. Co-authored with Richard A. Bideaux, Kenneth W. Bladh and Monte C. Nichols [see notes below], and continued on after Anthony's death by these individuals. This is one of the most important and valuable mineralogical references published in the late 20th and early 21st centuries, and eclipsed in its treatment of the subject only by C.A.F. HINTZE's monumental *Handbuch der Mineralogie* (Leipzig, 1898-1933). This modern *Handbook* series, complete in five volumes, encapsulates critical data about each valid mineral species. It was conceived in order to gather in one convenient place data critical to identification of all mineral species, and to provide relatively up-to-date references for each species listed. The intention is to provide sufficient information for the professional or amateur to distinguish one mineral species from another. Pertinent facts for each species have been distilled to one page and consist of the name, idealized chemical formula, crystal data, physical

properties, optical properties, cell data, X-ray powder pattern, chemistry, polymorphism & series, occurrence, association, distribution, name origin, location of type material and reference citations. This structure contains much of what is known about each mineral species, and as a mineralogical reference is unsurpassed in its thoroughness during modern times.

It is also a book valuable to amateur and professionals alike. It is fun as well as educational to browse the contents of these volumes and marvel at the variety of minerals and to consider their physical characteristics and the origin of their names. It is an especially valuable work for giving complete references and comparative chemical data for even rare species. In addition, the authors' expertise in judging specimen quality provides excellent source material for exact locality information where the best specimens have been found. This work is certainly one of the finest mineralogical treatises ever published, and hence its inclusion in this *Biobibliography* even though it is published well past the terminal date of 1920.

Richard August Bideaux. (BORN: Tucson, Arizona, U.S.A., 28 March 1935; DIED: Prescott, Arizona, U.S.A., 26 October 2004) *American mineralogist & pioneer in geological computer applications.* Bideaux is a graduate of the University of Arizona (B.S., Geological Engineering, 1959) and received his M.A. in geology from Harvard University in 1968. He discovered and helped to describe several new mineral species. As a field collector, he along with collecting partner, Richard L. "Dick" Jones [1933-1982] preserved many notable Arizona specimens, including fine examples of Defiance and Glove Mine wulfenite. He was employed at the Jet Propulsion Laboratory during the Surveyor missions to the moon, and was responsible for processing imaging data of the first pictures received by the U.S.A. from a heavenly body other than the earth. He returned to Tucson, Arizona in the late 1960's and founded Computing Associates with two partners. This company was a pioneer in computer applications in geology and mining engineering, and was responsible for determining the ore reserves of many mining companies throughout the world. As a consequence of his achievements in this area, in 1978 the University of Arizona bestowed on him the professional degree of Geological Engineer. Throughout most his life he has collected mineral specimens. A large portion of the fine collection he built was dispersed through Kristalle in 1985. He is a life fellow of the Mineralogical Society of America and a member of the Arizona Geological Society. The mineral species "Bideauxite" was named in his honor by S.A. Williams in 1970.

Kenneth William Bladh. (BORN: Chicago, Illinois, U.S.A., 7 November 1947; DIED:) *American geologist & mineralogist.* Bladh received his B.A. from Wittenberg University in 1969 and his M.S. and Ph.D. from the University of Arizona in 1973 and 1978, respectively. He is an expert in descriptive mineralogy and the low temperature geochemistry of weathering processes. He has been an Assistant Professor of Geology at Wittenberg University since 1978. Bladh is a member of the Mineralogical Society of America, the Geological Society of America, the Mineralogical Association of Canada and Sigma Xi.

Monte C. Nichols. (BORN: Davenport, Iowa, U.S.A., 1938; DIED:) *American chemist.* American chemist. Nichols was educated at the University of Arizona (B.S., Chemistry, 1960; M.S., Physical Chemistry, 1962). Formerly, he was a senior member of the technical staff, materials department, Sandia National Laboratories and winner of R&D 100 awards in 1986, 1988 and 1991 for

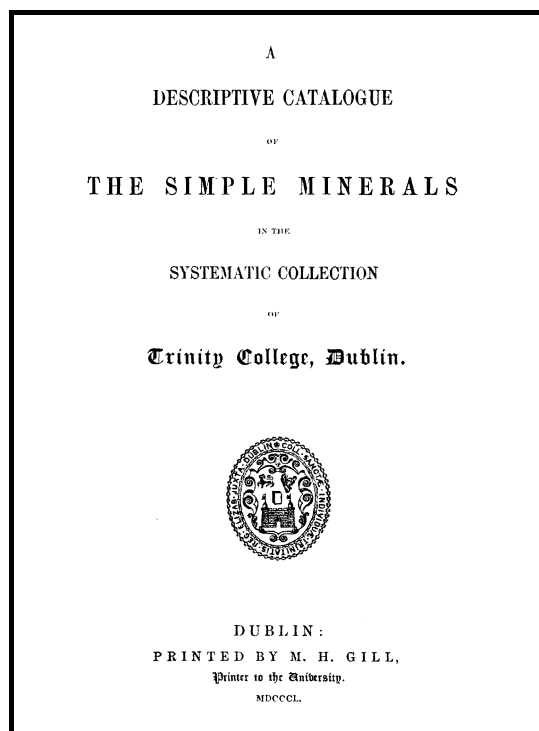
innovations in analytical instrumentation. Currently he is working for Aleph Enterprises. Fellow of the Mineralogical Society of America and co-author with Ernest H. Nickel [1925–] of the *Mineral Reference Manual* (New York, 1991).

REFERENCES: *American Mineralogist*: **77** (1992), 1122 [review of volume one by J.R. Craig]. • *Choice*: **33** (1996), no. 9, 213 [review, by J.R. Walker]. (Bideaux) Mitchell, S., "Who's who in mineral names: Richard A. Bideaux," *Rocks & Minerals*, ?? (198?), ?? • Personal communication. (Blaht) *American Men and Women of Science*, 18th edition, 1992-93: 1, 582.. • Personal communication. (Nichols) Personal communication.

APJOHN, James. (BORN: Sunville, Limericks, Ireland, 1 September 1796; DIED: 1886) *Irish physician, mineralogist & chemist.*

Apjohn studied medicine in Dublin, where he was for a long time associated with the city's general hospital. He then accepted an appointment as professor of chemistry and mineralogy at Trinity College, Dublin. In 1853, he was elected a Fellow of the Royal Society from Ireland.

REFERENCES: BBA: I 31, 329-333; II 1256, 110. • Boase, *Modern English Biography*, 1892-1921. • *Chemical News*: 18 June 1886, p. 296. • Crone, *Concise Dictionary of Irish Biography*, 1937. • Hirsch, *Biographisches Lexikon*, 1884-8. • *Journal of the Chemical Society*: **51** (1887), 469-70. • Poggendorff: **3**, 36. • Taylor, W.B.S., *History of the University of Dublin ... with biographical notices of many eminent men educated therein*. London, 1845. • Waller, *Dictionary of Universal Biography*, 1857-63. • WBI. • Webb, *Compendium of Irish Biography*, 1878.



DESCRIPTIVE CATALOGUE, 1850

214. — English, 1850.

A | Descriptive Catalogue | Of | The Simple Minerals | In The | Systematic Collection | Of | Trinity College, Dublin. | [ornament] | Dublin: | Printed By M.H. Gill, | Printer to the University. | MDCCCL.

8°: π^8 b² B-U⁸ Y²; 172ℓ.; [i]-xx, [1]-324 p. PAGE SIZE: 224 x 140 mm.

CONTENTS: [i-ii], Half title page, "Descriptive Catalogue, | &c. &c.," verso blank.; [iii-iv], Title page, verso blank.; [v]-xiii, "Preface.," [xiv], "Errata.," [xv]-xx, "Contents.," [1]-307, Text.; [308], Blank.; [309]-324, "Index."

SCARCE. Published anonymously, but attributed to James Apjohn. The preface provides a short history of earlier catalogs of the collection, before presenting an overview of the methods adopted in this work. Apjohn uses the arrangement of Beudant as outlined in the *Traité de Minéralogie* (2nd ed., Paris, 1830-1). Thus the collection is arranged in thirty-two sections, corresponding to the families of Beudant. Within each family, the genera and species represented in the specimens of the collection are described. An index at the end gives an alphabetical arrangement of the species mentioned.

REFERENCES: BMC: 1, 53 & 482.

AQUINO, Thomas De, Saint.

See: Thomas Aquinas, Saint.

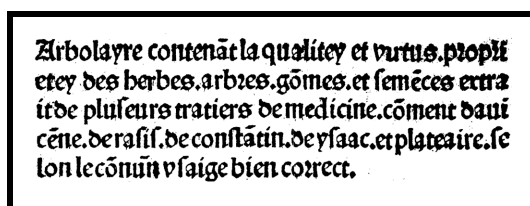
ARANA, Salvador Calderón Y.

See: Calderón Y Arana, Salvador.

ARBOLAYRE (or Grant Herbar).

A French herbal that was supposedly a translation of one of the early German herbals. Although the earliest edition (issued under the title "Arbolayre") was illustrated with German cuts formerly used in an edition of the *Gart der Gesundheit*, the text is completely different from the German and Latin *Hortus*. Subsequent editions were issued under the title, *Grant Herbar*.

REFERENCES: Klebs, *Catalogue of Early Herbals*, 1925: p. 41.



INCIPIT OF ARBOLAYRE, 1486

215. — French, 1486 [First edition].

Arbolayre contenāt la qualitey et virtus proprieté des herbes, arbres, gōmes et semēces extrait de plusieurs tratiers de médecine ... [Besançon, Peter Metlinger, about 1486-88].

2°: A⁸ B-C⁶ D-E⁸ F⁶ G-H⁸ I⁶ K⁸ L⁶ M-N⁸ O⁶ P-X⁸ Y¹⁰ Aa-Ff⁸; [214] leaves, woodcuts. First leaf,

with large woodcut. Double columns, 39-40 lines to a column. EXTREMELY RARE.

REFERENCES: BL: [IB.44100.]. • Claudin, *Histoire de l'Imprimerie*, 1900-15: 4, 479-485. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: 584. • Goff: A-944. • GW: no. 2312. • Klebs, *Incunabula Scientifica*, 1938: no. 508.1. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 52. • Klebs, *Catalogue of Early Herbals*, 1925: no. 54. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1101 [Lyons, Maillet]. • Polain, *Catalogue*, 1932: no. 1880. • Wellcome Catalog (Books): 1, no. 368.

216. 1498: Le grant herbier en françois. Paris, Pierre Le Caron, c1498.

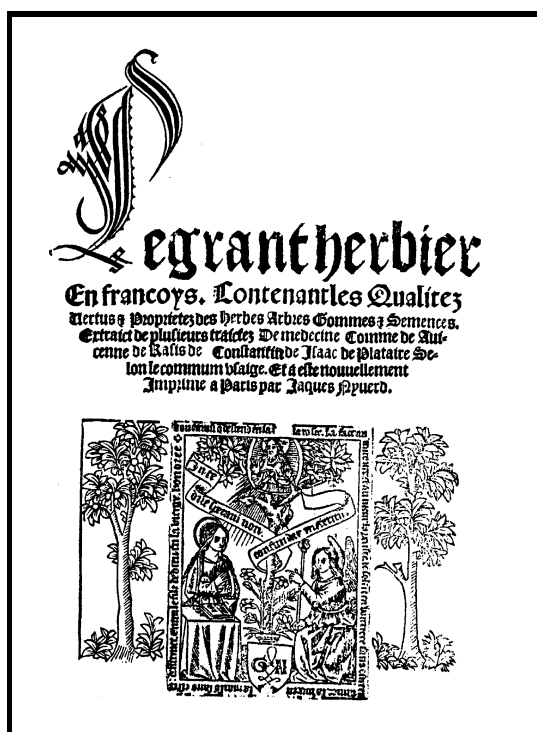
2°: VERY RARE.

REFERENCES: BMC XV: 8, 142 [IB 40165]. • Claudin, *Histoire de l'Imprimerie*, 1900-15: 2, 83-84. • Goff: A-945. • GW: no. 2313. • Klebs, *Incunabula Scientifica*, 1938: no. 508.2. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 52. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1102.

217. 1498-1500: Le grant herbier en françois. Paris, Le Caron, [about 1498-1500].

2°: a6 e6 o6 2o4 A8 B-E6 F8 G-O6 P8 Q-X6 y6 z6 x4; 170 leaves, 24-169 numbered ii-cxlvii. Double columns, 41 lines to a column. COLOPHON: [fol. 170 recto:] Cy finist le grant herbier Translate de latin en frācois, etc. VERY RARE.

REFERENCES: BL: [IB.40165.]. • Goff: no. A-946. • GW: no. 2313/10. • Klebs, *Incunabula Scientifica*, 1938: no. 508.3. • Klebs, *Catalogue of Early Herbals*, 1925: no. 55.



LE GRANT HERBIER, c1520

218. c1520: Le grant herbier | En francoys. Contenant les Qualitez | ... ADD REMAINDER OF TITLE ... | [Woodcut vignette].

2°: 108, [12]ℓ RARE.

REFERENCES: Sallander, *Bibliotheca Walleriana*, 1955: no. 3700.

219. c1535: Le grand herbier en francoys: contenant les qualitez, vertus et proprietes des herbes, arbres, gommess, semences, huyles, et pierres precieuses. Extraict de plusieurs traictez de Medecine, comme de Auicene, Rasis, Constantin, Isaac, Plataire, et Ypocras. Selon le commun usage. Imprime nouuellement a Paris. On les vend a Paris, En la rue neufue Nostre Dame a lenseigne Saint Nicolas, [c1535].

4°: 2a8 2b-2c4 2d6 a-z4 z4 A-F4 G8 H-L4 M8 N-O4 P6; 188ℓ; [22], 166ℓ. Title in red & black, woodcuts (one on title page), illus. Leaf clxi and clxii, clxv and clxvi misnumbered clxxi and clxxii, clxxv and clxxvi respectively. COLOPHON: Nouuellement imprime a Paris pour Pierre Sergent demourant en la rue neufue Nostre Dame a lenseigne Saint Nicolas Pierre Sergent active from 1532-1547 according to P. Renouard. Imprimeurs parisiens, p. 341; date of ca. 1535 inferred from publication date of ed. printed in Paris by Denis Janot which closely resembles the title and collation of this ed.—cf. Hunt botanical cat., 35.

VERY RARE. First published about 1486-1488 under title: Arbolayre. The text of the Le grand herbier contains 474 chapters, of which 264 were taken from an earlier work, the Circa instans, which is attributed to Matthaeus Platearius of the School of Salerno.—cf. Anderson, F.H. An illustrated history of the herbals, 1977.

REFERENCES: Nissen (BBI): no. 2330. • Wellcome Catalog (Books): 1, 3113.

220. 1539? Le grant herbier en francoys, contenant les qualitez, vertus et proprietes des herbes, arbres, gommess, semences, huylles et pierres precieuses. Extraict de plusieurs traictez de medecine. Comme de Auicenne, Rasis, Constantin, Isaac, Plataire, et Ypocras selon le commun usage. Paris, J. Janot, [1539?].

4°: [20], 176ℓ. Title page in red & black, woodcuts (2 on title page). VERY SCARCE.

221. c1544: Le grant herbier en francoys contenant les qualitez vertus et proprietes des herbes arbres gommess et semences. Extraict de plusieurs traictez de medecine comme de Auicenne de Rasis de Constantin de Isaac et de Plataire. Selon le commun usage. Paris, Jacques Nyverd for J. Petit & M. le Noir [pour Francoys regnault, between 1521 and 1544].

2°: 108, [12] leaves, woodcuts, illus. VERY SCARCE.

English editions

222. First edition, 1526: [In red:] The grete herball [ornament] | [in black:] whiche [in red:] geueth [in black:] parfyte [in red:] knowledge [in black:] and [in red:] vnder | [in black:] standyng of all maner of herbes & there gracyous vertues whiche god hath | ordeyned for our prosperous welfare and helth / for they hele & cure all maner | of dyseases and sekenesses that fall or mysfortune to all maner of creatoures | of god created / practysed by many expert and wyse maysters / as Auicenna & | other. &c. Also it geueth full parfyte vnderstandyng of the booke lately pren | tyd by me (Peter treueris) named the noble experiens of the vertuous hand | warke of surgery. | [large woodcut].

2°: ♣6 A-Z6 Aa-Ee6; 174ℓ; no pagination or foliation. Title page in red and black. Woodcut title page, a full page cut of a human skeleton, and more than 470 woodcuts of plants, animals, etc. Printer's device, surrounded by a border, at the end. Two columns, 43 lines. Many errors in chapter numbers. COLOPHON (Ee6v): [Within a frame composed of border pieces:] Printer's device | ¶ Impretyd at London in South- | warke by me Peter Treueris / dwel- | lynge in the synge of the w dowens. | In the yere of our lorde god. M.D. | xxvi. the xxvii. day of July.

EXTREMELY RARE. First extant edition of the *Grete Herball*, the second herbal printed in England. "The most famous of the early herbals." (Rohde). It is the first English illustrated herbal—the herbal of R. Banckes issued

in 1525 has no illustrations.

The text consists of chapters i-cccccv. With the exception of the preface and the treatise on urines, the Grete Herball is a translation of the French *Grand Herbar* or *Arbolayre*. The preface and the treatise on urines show a strong resemblance to the corresponding parts of the German *Gart*. This English issue is important for presenting on the early English names of plants. The woodcuts of the plants are copied from the those in the Dutch herbals, probably the 1511 edition. The skeleton is copied from Grüninger's cut.

The title page cut shows a charming woodcut of a garden, with a man holding a spade and gathering grapes, and a woman throwing flowers and herbs out of her apron into a basket. Figures of female and male mandrake in the lower corners. The title cut and the text cuts reappear in the Dutch *Gart der Gesundheit* edition of 1538, issued in Ulrecht by Jan Bernits printed from the same blocks. Complete copies are exceptionally rare.

REFERENCES: Arber, *Herbals, their Origin and Evolution*, 1986: p. 40-6. • Cleveland Herbal & Botanical Collections, 1992: no. 36. • Henrey, *British Botanical Literature*, 1975: 1, 168. • Hunt Botanical Catalog: no. 25. • Klebs, *Catalogue of Early Herbals*, 1925: no. 59. • Nissen (BBI): no. 2296. • Rohde, *Old English Herbals*, 1922: p. 65-73. • STC: no. 13176.

223. 2nd edition, 1529: [In red:] The grete herball [ornament] | [in black:] whiche [in red:] geueth [in black:] parfyte [in red:] knowledge [in black:] and [in red:] vnder | [in black:] standyng of all maner of herbes ⁊ there gracyous vertues whiche god hath | ordeyned for our prosperous welfare and helth / for they hele ⁊ cure all maner | of dyseases and sekenesses that fall or mysfortune to all maner of creatoures | of god created / practysed by many expert and wyse maysters / as Auicenna ⁊ | other. ⁊c. Also it geueth full parfyte vnderstandyng of the booke lately pren | tyd by me (Peter treueris) named the noble experiens of the vertuous hand | warke of surgery. | [large woodcut].

2°: Gothic letter. COLOPHON: ¶Imprynted at London in South | warke by me Peter Treueris. In | the yere of our Lorde god. M.D.XXIX. | the xvii day of Marce.

VERY RARE. A reprint of the first editon (1526) with the text completely reset.

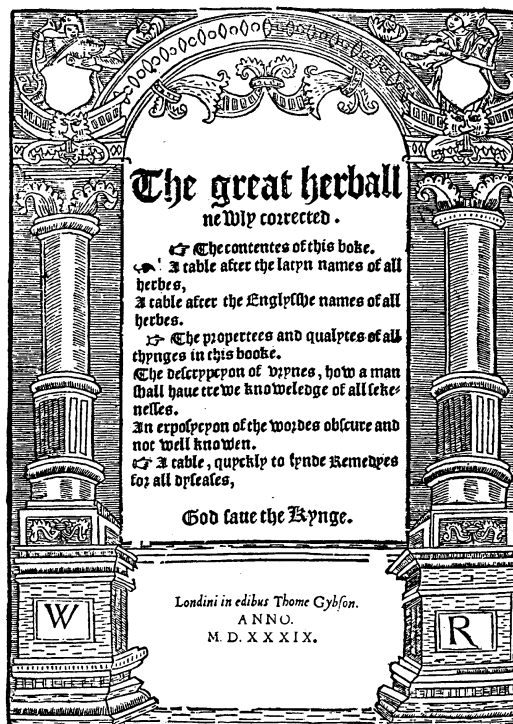
REFERENCES: Rohde, *Old English Herbals*, 1922: 65-73 & 207. • STC: no. 13177. • Wellcome Catalog (Books): 1, no. 3114.

224. 3rd edition, 1539: [Contained within a two compartment woodcut border incorporating the initials "W" and "R":] The great herball | newly corrected. | [The contentes of this boke. | A table after the latyn names of all | herbes, | A table after the Englysche names of all | herbes. | The propertes and qualytes of all | chynge in this booke. | The descryptyon of viynes, how a man | shall haue tte we knoweledge of all leke= | nesses. | An erposycyon of the wordes obscure and | not well knownen. | A table, quickly to kynde Remedyes | for all diseases, | God saue the Kyng. | [Within the second compartment:] Londini in edibus Thome Gybson. | Anno. | M. D. XXXIX.

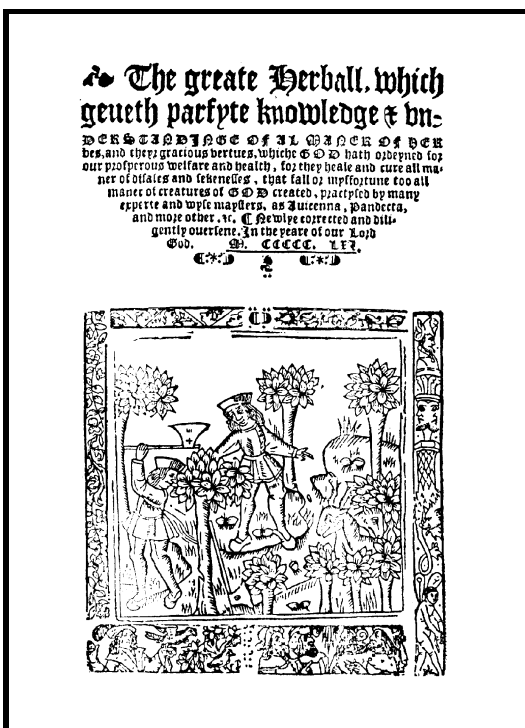
2°: π⁴ A-Bb⁴ Cc⁶ (\$3 signed); 106ℓ.; no pagination or foliation. RARE.

REFERENCES: Cleveland Herbal & Botanical Collections, 1992: no. 55. • Henrey, *British Botanical Literature*, 1975: no. 170. • STC: no. 13178.

225. 4th edition, 1561: ¶The greate Herball, which | geueth parfyte knowledge & un= | derstandyng of al Maner of Her= | bes and theyr gracyous vertues, whiche God hath ordeyned for | our prosperous welfare and health, for they heale and cure all ma= | ner of disases and sekenesses, that fall or misfortune too all manner of creatues of God created, practysed by many | experte and wise masters, as Auicenna, Pandecta, | and many other .ec. ¶ Newly corrected and dili= | gently ouersene. In the yere of our



THE GREAT HERBALL, 1539



THE GREATE HERBALL, 1561

Lord | God. M. CCCCC. LXI. | [rule] | [ornaments] |

ARDUINO

[Woodcut vignette].

2°: 148ℓ. Woodcut on title page. Several other woodcuts in the text. Gothic type in 2 column.

RARE. Translation from the French *Arbolayre* or *Grant Herbar*. This herbal is a treatise on all sorts of herbs, flowers, roots and a few minerals used as remedies. A brief description of the item is given followed by one to several paragraphs outlining medical applications. Among the minerals described is the "lapis magnetis" or loadstone, with its use in drawing iron from a wound. The treatise on urines has been copied from the *Gart*.

d'ARCHIAC, Etienne Jules Adolphe Desmier, Vicomte. (BORN: 1802; DIED: 1868?) *French geologist.*

226. — French, 1834-59.

Histoire | Des Progrès | De La Géologie | De 1834 A 1859 | Par | A. d'Archiac | Membre de l'Institut; | Publiée | Par La Société Géologique De France, | Sous Les Auspices | De M. Le Ministre De L'Instruction Publique. | [rule] | Tome Premier. | [rule] | Paris, | Au Lieu Des Séances De La Société | Rue Du Vieux-Colombier, 24. | 1847 [-1860].

8 vols. in 9. [VOL 1] 8°: [2], xxvii, 679 p. [VOL 2, pt. 1] 8°: [2], 439, [2] p. [VOL 2, pt. 2] 8°: pp. [441]-1100, [2] p. [VOL 3] 8°: 624 p. [VOL 4] 8°: [2], 600 p., 2 folding plates. [VOL 5] 8°: [2], 619 p. [VOL 6] 8°: [2], 731 p., 2 folding plates. [VOL 7] 8°: [2], 714 p. [VOL 8] 8°: [4], 680 p. PAGE SIZE: 228 x 148 mm. uncut

VERY SCARCE. One of the most important accounts on the progress of the geosciences in the first half of the 19th century with a wealth of information especially on French developments with a stress on the early publications of the famous *Société Géologique de France*. Because of its proximity, there are mineralogical nuggets of information contained in the volumes.

Contents: v1. Cosmogonie et géogénie, physique du globe, géographie physique, terrain moderne. v2, pt 1. Terrain quaternaire ou diluvien. v2, pt 2. Terrain tertiaire. v3. Formation nummulaire. Roches ignées ou pyrogènes des époques quaternaire et tertiaire. v4-v5. Formation crétacée. v6-v7. Formation jurassique. v8. Formation triasique.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 45.

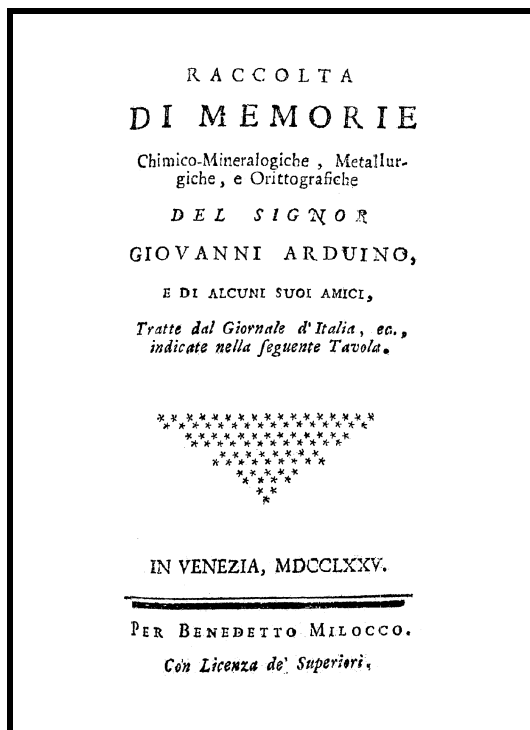


ARDUINO

ARDUINO, Giovanni. (BORN: Caprino, Italy, 16 October 1714; DIED: Venice, Italy, 21 March 1795) *Italian geologist.*

Arduino was educated at Verona, Italy. He was employed with the government mining service, becoming director of mining works in Tuscany. He was appointed professor of mineralogy and metallurgy at Venice, and later Padua. Arduino was the first to classify rocks as Primary, Secondary and Tertiary, 1760, and also the first to recognize the volcanic origin of crystalline rocks. Arduino recognized the benefit of applying chemistry and paleontology to the chronology of geological formations for age dating purposes.

REFERENCES: ABI: I 68, 162-208. • Catullo, T.A., *Elogio di Giovanni Arduino. Discorso inaugurale letto nella grand' aula dell' I.R. Università de Padova*. Padua, 1839. 44 p., portrait. • DBA: I 30, 302-304. • *Dizionario Biografico Italiano*. • DSB: 1, 233-4 [by F. Roddico]. • Gortani, *Italian Pioneers in Mineralogy*, 1963. • *ISIS*, 1913-65: 1, 52. • Kettner, Radim., "Giovanni Arduino (1714, +1795)," *Casopis pro Mineralogii a Geologii*, 9 (1964), no. 1, 122-3. • La Rocque, *History of Geology*, 1964: 1, 5 [by A. Mirsky]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 12. • Leonardi, P., "Una lettera di Giovanni Arduino geologo veneto (1714-1795) ad Alberto Fortis," *Memorie degli Istituti di Geologia e Mineralogia dell' Università de Padova*, 29 (1971), 13 p., 3 figs., one plate. • Poggendorff: 1, col. 58. • Provenzal, *Bibliografici di Chimici Italiani*, 1938: pp. 33-40. • Sarjeant, *Geologists*, 1980: 2, 438, Suppl. 1 (1986), 1, 254 & Suppl. 2 (1995), 1, 394. • Stegnano, G., *Il veronese Giovanni Arduino e il suo contributo al progresso della scienza geologica* Verona, Italy: Ministro dell' Istruzione Pubblica, 1929. 42 p., portrait. • WBI. • *World Who's Who in Science*: 60. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.



RACCOLTA, 1775

227. — Italian, 1775.

Raccolta | Di Memorie | Chimico-Mineralogische, Metallur- | gische, e Orittografiche | Del Signor | Giovanni Arduino, | E Di Alcuni Suoi Amici, | Tratte dal Giornale d'Italia, ec, | indicate nella sequente Tavola. | [decorative design made of *] | In Venezia, MDCCLXXV. | [double rule] | Per Benedetto Milocco. | Con Licenza de' Superiori.

12°: π^6 A-C¹² D⁴; A-B¹²; A¹² B²; A¹²; A-K¹²; \star^{12} ; 216 ℓ .; [12], [1]-76, [4], [1]-48, 1-27, [1], [1]-22, [1]-237, [1], 1-24 p., 3 plates (p. 96-2, and at end).

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], Dedication.; [2 pgs], "Tavole Delle Memorie." (table of contents, 11 memoirs listed).; [2 pgs], "Error Corsi Nella Stampa."; [1], "Notizie."; [2], Blank.; 3-6, Text of Notizie.; 7-62, Text, "Memoria Epistolare | In Reposita | [...5 lines...] | Orazio Mario Pagni."—dated 12 July 1772 (p. 62).; 73-76, "Osservazioni | [...4 lines...] | Giangiacomo Ferber."; [4 pgs], "Libri Che Si Stampano | Per Associazioni E | Da Benedtto Milocco."; [1], Sectional title page starting, "Delle | Celebri Acque Minerali, | [...13 lines...]"; [2], Blank.; 3-48, Text.; [1], Sectional title page starting, "Saggio | Di Osservazioni | [...16 more lines...]"; [2], Blank.; 3-27, Text.; [1 pg], Blank.; [1], Sectional title page starting, "Lettera Orittografica | del Celebre Signor | Gian-Giacomo Ferber. | [...11 more lines...]—dated 1771.; [2], Blank.; 3-22, Text.; [1], Sectional title page, "Due Memoire Epistorari | [...3 lines...] | Gio. Jacobo Ferber, | [...10 lines...]"; [2], Blank.; 3-35, Text.; [36], Blank.; [37], Sectional title page, "Osservazioni | Sopra | Le Minere Di Ferro | Di | Eisenarz | Nella Stiria."; [38], Blank.; 39-93, Text.; [94], Blank.; [95], Sectional title page, "Sagio | Fisco-Mineralogico | Di Lythoconia, E Orognosia."; [96], Blank.; [2 folding plates of (1) mine works and (2) furnaces.]; [97], Sectional title page, "Sagio | Fisco-Minalogico | Di Lythogonia, E Orognosia | [...16 lines...]"; [98], Blank.; 99-201, Text.; 202-237, "Appendice."; [1 pg], Blank.; 1-24, "Du Lettre | Orittologiche."; [At end], One plate (showing cross section).

RARE. Collected essays concerning various aspects of mineralogy, chemistry and metallurgy. It is in the form of a series of letters addressed to famous mineralogists and geologists of the day including JOHANN JAKOB FERBER.

REFERENCES: BL: [987.a.22.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 289-90. • *Göttingische gelehrte Anzeigen*: 1775, p. 977. • LKG: VI 62a. • NUC: 19, 697. • Roller & Goodman, *Catalogue*, 1976: 1, 47.

228. German transl., 1778: Sammlung | einiger mineralogisch= chymisch= metal= | lurgisch= und oryktographischer | Abhandlungen, | des | Herrn Johann Arduino, | und einiger Freunde desselben. | Aus dem Italiänischen übersetzt, | durch | A.C. v. F., C.S.B.C.R. | [double rule] | Dresden, 1778. | In der Waltherschen Hofbuchhandlung.

8°: γ^2 A-Y⁸ Z⁷; 185 ℓ .; [6], [3]-362, [4] p., 2 plates. PAGE SIZE: 200 x 120 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorbericht."—dated 1778.; [3], "Nachricht | von der Quelle eines in dem | Gebirge von Arzignano, im Bizentinischen, | neuentdeckten | säuerlichen | Gefundbrunnens; | nebst | einem Antwortschreiben | an den | Berühmten Herrn | D. Hor. Maria Pagani, | ..."; [4], Blank.; [5]-362, Text.; [2 pgs], "Verzeichniß | derer in dieser Sammlung enthaltenen Ab= | handlungen."; [2 pgs], "Verbesserungen."

VERY SCARCE. Translation by JOHANN JAKOB VON FERBER from *Raccolta di Memorie Chimico-Mineralogische, Metallurgische et Orittografiche* (Venezia, 1775).

REFERENCES: BL. • CBN: 3, 1011. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 40. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 290. • LKG: VI 63b. • NUC: [no copy listed].

229. — Italian, 1782.

Memoria Epistolare | Sopra Varie Produzioni | Vulcaniche, Minerali | e Fossili | Del Signor | Giovanni Arduino, | Tratta dal Nuovo Giornale | d'Italia. | [ornament] | Venezia, 1782. | Appresso Benedetto Milocco.

12°: [2], [1]-36, [2] p.

CONTENTS: [2 pgs], Title page, verso blank.; [1], "Al celebre Signor | Nathanel-Godo-Fredo-Leske..." (=dedication).; 2-36, Text.; [1 pg], "Si Corregga." (=errata).; [1 pg], Blank.

RARE. In this letter addressed to NATHANAEL GOTTFRIED LESKE dated the 2 July 1782, Arduino provides descriptions of various objects he had found in Italy. Included are descriptions of Vesuvius' volcanic ejecta, zeolites, metallic ores, minerals and fossils.

REFERENCES: BL. • LKG: XIII 275. • NUC: [no copy listed]. • Roller & Goodman, *Catalogue*, 1976: 1, 47.

230. — Italian, 1774.

Saggio Fisco-Mineralogico di Lythogonia, e Orognosia. Padova, [1774].

4°: 76 p.

VERY SCARCE. First separate issue. An extract from *Atti dell' Accademia dell Scienze di Siena*, 5, 203 ff.

REFERENCES: BL: [B.355.(1.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 289 ["sehr gut"]. • *Göttingische gelehrte Anzeigen*: 1775, p. 964. • LKG: VI 61. • NUC: [no copy listed].

231. — Italian, 1779.

Al celebre signor Nathanael-Godo-Fredo Leske ... Lettera orittologica del chiarissimo signor Giovanni Arduino ... [Venezia?, n.d.].

8°: 36 p. VERY SCARCE.

REFERENCES: Hoover Collection: no. 50.

232. — Italian, 1779.

Osservazioni Chimiche sopra Alcuni Fossili. Del signor Giovanni Arduino. Venezia, Appresso Benedetto Milocco, 1779.

8°: 58, [1] p. RARE.

REFERENCES: Hoover Collection: no. 53.

ARENSWALD, C.F. von.

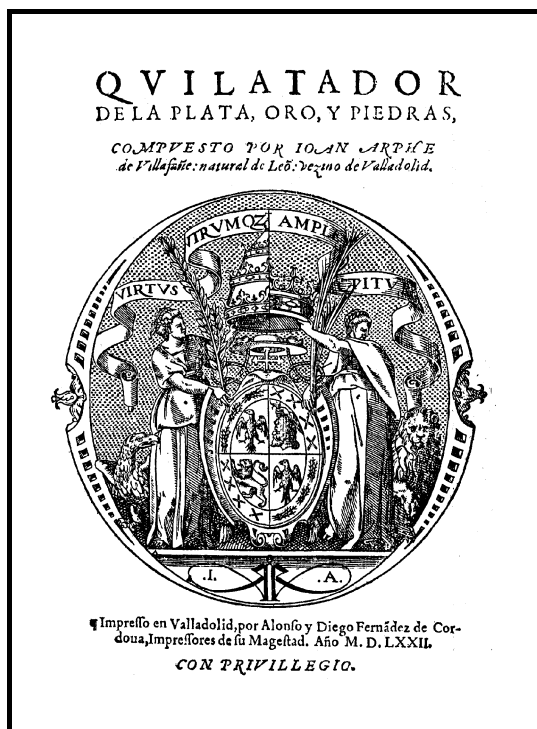
REFERENCES: Lambrecht & Quenstedt, *Catalogus*, 1938: 13.

233. — German, 1780.

Galanterie= | Mineralogie | und | Vorschläge | zur | Naturwissenschaft | für die Damen | in sieben Unterhaltungen | abgefasst | von | C.F. von Arenswald. | [ornate rule] | Halle, | bey Johann Jacob Gebauer. | 1780.

8°: A-J⁸ K⁴; 76 ℓ .; [1]-152 p.

CONTENTS: [1-2], Title page, verso blank.; [3]-152, Text.



QVILATADOR, 1572

VERY RARE. A mineralogy designed to instruct ladies in the science of mineralogy. The text discusses the collecting of mineral and natural history specimens, differences between false and genuine gemstones, lapidary craft, and jewelry manufacturing. At the end is a discussion cast into a conversation between two girls about the collecting of specimens and the value of forming collections. The tone of the text suggests that the pseudonym used by the author was to hide her true gender.

REFERENCES: BL: [no copy listed]. • BMC: 1, 59. • CBN: 3, 1046. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 28. • LKG: XVI 239. • NUC: [no copy listed]. • Sinkankas, *Gemology Bibliography*, 1993: no. 193.



ARFE Y VILLAFANE

ARFE Y VILLAFANE, Juan de. (BORN: 1535; DIED: 1603) *Spanish geologist & naturalist.*

234. — Spanish, 1572 [First edition].

Qvilatador | De La Plata, Oro, Y Piedras, | Compvesto Por Ioan Arphe | de Villafañe: natural de Leō: vezino de Valladolid. | [ornament] | Impresso en Valladolid, por Alonso y Diego Fernādez de Cor- | doua, Impressores de su Magestad. Año M.D.LXXII. | Con Privilegio.

8°: ¶⁴ A-I⁸ χ¹; 77ℓ.; [8] p., 71 numbered leaves, [4] p., illus., tables.

RARE. This early treatise written for goldsmiths, jewelers and the like contains information for those interested in precious metals and cut gems generally. The first two sections describe methods and techniques of assaying, purifying and allowing gold and silver illustrated with several woodcuts of apparatus. Other sections contain important and reliable information on weighing, sizing and valuation of precious stones. Descriptions include magical and medicinal virtues, varieties and sources of the gemstones.

REFERENCES: Hoover Collection: no. 54 [reproduces the title page]. • LKG: III 24. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 43-7, no. 130a. • Sinkankas, *Gemology Bibliography*, 1993: no. 215 [long description].

235. 2nd edition, 1598: Quilatador | De La Plata, Oro Y Pie- | dras, conforme a las leyes Reales, y | para delcaracion de ellas | [ornament] | Hecho Por Ioan De | Arphe Villafañe natural de Leon, | [5 lines of titles and memberships] | Impresso en Madrid, en casa de Gui- | llermo Drouy, Año. 1598.

4°: [16], 244ℓ.

VERY SCARCE. Maffei & Figuera say this edition is less rare than the first edition. It is an enlarged book with an additional section describieng pearls and the virtues of gems.

REFERENCES: LKG: III 24. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 43-7, no. 130b. • Sinkankas, *Gemology Bibliography*, 1993: no. 217.

236. 3rd edition, 1678: Qvilatoador | De Oro, Plata, | Y Piedras. | Compvesto Por Ivan De Arphe | y Villafañe, natural de Leon, Escultor de Oro, y | Plata, en las Casas Reales de la Moneda | de Segovia. Dedicado A Don Pedro De Pomar, Del | Consejo de su Magestad, en el Real de Hazienda, Tallador Mayor per- | petuo por juro de heredad' de las Reales Casas de Moneda de To- | ledos, Señor del Lugar de Miana, enel Reyno de | Aragon, &c. | Año [ornament: portrait] 1678. | Con privilegio: En Madrid. Por Antonio Francisco de Zafra | Criado de su Magestad, en su Real Bolateria. | [rule] | A costa de Doña Maria del Ribero, vinda de Bernaredo de Sierra Menegales | Libras. Vendese en su casa en la Puerta del Sol, i laesisima de Luicina. [The last 2 lines difficult to read].

4°: π⁴ A-Z⁴ Aa-Bb⁴ Cc²; 212ℓ.; [16], 408 p. RARE.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 218.

d'ARGENVILLE, Antoine Joseph Dezallier.

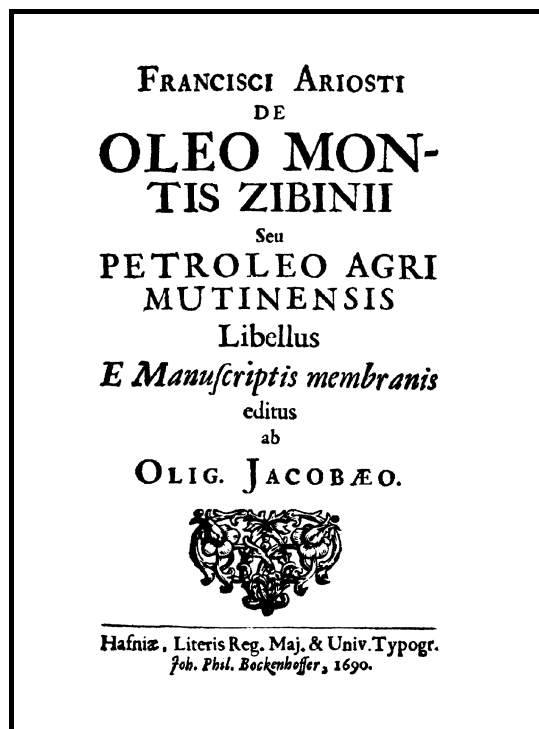
See: Dezallier D'argenville, Antoine Joseph.

ARIOSTO, Francesco. (BORN: Ferrara, Italy, 1430; DIED: Ferrara, Italy, 1499) *Italian physician.*

Ariostus was a physician and professor of civil law at the University of Ferrara.

REFERENCES: ABI: I 71, 273-282; II 24, 309. • *Dizionario Biografico Italiani*: 4, 169-71 [by M. Quattrucci].

- Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, col. 533. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • Poggendorff: 1, col. 61. • WBI.



DE OLEO MONTIS ZIBINII, 1690

237. — Latin, 1690 [First edition].

Francisci Ariosti | De | Oleo | Mon- | tis Zibinii
| Seu | Petroleo Agri | Mutinensis | Libellus |
E Manuscriptis membranis | editus | ab | Olig.
Jacobæo. | [ornament] | [rule] | Hafniae, Literis Reg.
Maj. & Univ. Typogr. | Joh. Phil. Bockenhoffer,
1690.

8°: [1]-79, [3] p.

CONTENTS: [1-2], Title page, verso blank.; [3]-8, Dedication.; 9-12, Preface.; 13-17, Biographical sketch of Ariosto.; 18-76, Text.; 77-79, Letter of recommendation, dated December 1462.; [1 pg], Blank.; [2 pgs], Index.

VERY RARE. One of the earliest published texts devoted to the subject of petroleum, this curious tract was published from manuscript material written over two centuries earlier. OLIGERUS JACOBÆUS, the editor, dedicates the work to the famous Italian bibliophile Antonio Magliabecchi [1633-1714]. Pages 9-12 contains "a preface to the reader giving some account of this mineral oil, or naphtha, found at Mons Zibius, Gybius, or Zilius, in the Modenesse territory, comparing it with naphtha from India and indicating certain analogies with amber. There is next a short biographical sketch—in Italian—of Ariostus, written by Antonio Libanori and communicated by Magliabecchi. The tract itself (pp.

18-38) gives an account of the oil, and then (pp. 38-76) a description of cures effected by the use of it. The work concludes (pp. 77-79) with a presentation letter from Ariostus to Duke Borsius dated December, 1462, and the Duke's reply, after which is the Index." (Ferguson).

Other editions: An enlarged edition appeared in 1698: *Francisci Ariosti De Oleo Montis Zibinii, seu Petroleo agri Mutinensis. Libellus e Manuscriptis Membranis Editus ab Oligero Jacobæo ... Nunc Autem ad fidem Codicis M. S. ex Bibliotheca Estensi Recognitus, et Recusus ...* Mutinae, Typis Antonii Capponi, 1698. 2 parts, 12°: [8], 67, [3], 35 p. [NUC: 20, 482, NA 0397921]. Another edition appeared in 1713: *De Oleo Montis Zibinii ... cum Bernhardus Ramazzini Libro de Fontibus Mutinensibus.* Patavii, 1713. 8°: [16], 248 p., one folding plate.

REFERENCES: BL: [B.655.(6)]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 41. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 150-1. • Jonathan Hill, Bookseller: cat. 16, no. 9. • LKG: XVI 262. • NLM 17th Century Books (Krivatsy): no. ?? . • NUC: [no copy listed]. • Wellcome Catalog (Books): 2, p. 55.



ARISTOTLE

ARISTOTLE. (BORN: Stagira, Chaldice, near Macedon, Greece, 384 B.C.; DIED: Chalcis, Island of Euboea, Greece, 322 B.C.) *Greek philosopher.*

Aristotle was the son of Nicomachus, physician to King Amyntas II of Macedon. He became a student of Plato, at the Athens Academy, 367-347 B.C.E. Afterward he traveled throughout the Greek world, especially Asia Minor, 347-342 B.C.E. He was appointed by Phillip II of Macedon to be tutor to his son (later called Alexander the Great). Aristotle founded and was a teacher of the Lyceum (or Peripatos) in Athens, 335-323 B.C.E. In 323 B.C.E., he retired to Chalcis upon death of his guardian, Alexander the Great. He is the founder of the systematic study of symbols and logic and theory of symbolism which enabled him to develop logic as a science. He collected facts about the natural world around him through personal observation. These he then recorded in a series of monographs which were handed down through manuscript until the invention of printing. Aristotle, as a teacher, had great influence on his students, with his ideas and ideas attributed to him, becoming the cornerstone of western science and philosophy for one and a half millennia.

ARISTOTLE

REFERENCES: *Catalogue of Portraits of Naturalists*: 123 [5 portraits listed]. • DSB: 1, 250-81 [by L. Minio-Paluello]. • *Encyclopaedia Britannica*, 11th edition. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 61. • Schaedler, *Biographisch Handwörterbuch*, 1891: 3. • *World Who's Who in Science*: 61-2.



LAPIDARIUS, 1473

Lapidarius

238. — Latin, 1473.

Lapidarius Aristotilis.—Quomodo virtutes pretiosorum lapidum augmentantur. — Physiognomia. Merseburg, [anonymous printer, probably Lukas Brandis], 20 October 1473.

2^o: [a¹⁰ b-d⁸ e⁶] (unsigned); 40 leaves, the first and last blank.; no pagination. Gothic type, 2 columns, 37 lines. COLOPHON (39v, col. 2): “Anno dñi Millesimoqdrin= | gentesimoseptuagesimoter | cō in uigilia xj miliū virginū | cōpletū est psens opus In | Ciuitate. Merszborg:”

CONTENTS: Folios 1, Blank.; 2r, “[A5]Tendite a falsis | pphetis qui ueni= | unt ad uos in ue= | stimentis ouū. in | trinsecus aut sunt | lupi rapaces ...”; 39v, col. 1, “Explīc liber de phisonomia | liber em diuidit in tres par | tes In pma pte tradit uide= | licz Lapidarius aristotilis. | de nouo a greco trāslat⁹ ... Scō'o quō uirtutes pci | osoz lapio' augmentat et al | terat ...”; 39v, col. 2, line 10, “Tercia pars est de ipa met | phisonomia / & incipit ibi | Restat de signis phisomie. | Anno dñi Millesimoqdrin= | gentesimoseptuagesimoter | cō in uigilia xj miliū virginū | cōpletū est psens opus In | Ciuitate. Merszborg:”; 40, Blank.

EDITIO PRINCEPS. Extremely rare. The *Lapidarius* was the first lapidary printed after the invention of mechanical printing, and this is the second book printed at Merseberg. It is attributed to Aristotle being called the “Lapidarius et Liber de physionomia of Aristotle,” but was composed long after his death because the text refers to more recent authorities such as Rasis and Albertus Magnus, and alludes to the mountains of Lombardy, St. Gotthard, a castle in Saxony, and to the river Saale which flows in Franconia and is called the Christian Saale, and that which descends towards Saxony and is known as the pagan Saale. It is a work entirely devoted to precious stones and physiognomy, “written in honor of Wenzel II, king of the Bohemians” [1266-1305]. The manuscript is preserved as a fifteenth-century text in the Public Library, Bern (MS. 513) as an anonymous physiognomy. It is an entirely different text from the Lapidary of Aristotle published by Julius Ruska at Heidelberg in 1912 [which see next entry].

The work is divided into three parts. In the first is treated the Lapidarius of Aristotle in the new translation from the Greek with all the other lapidaries and their statements as to the colors, virtues, and place of generation of each stone. The second part describes how the virtues of precious stones are increased and altered according to diverse situations, such as wearing them on the finger or in the armpit, or combining them with other things and engraving characters on them. The third part is devoted to physiognomy itself.

The printing of this work has been assigned to the printer Lukas Brandis [see note below].

Lukas Brandis. (BORN: ; DIED:) *German printer*. In 1475, Brandis published at Lübeck a world history, which was the first title published in this city.

REFERENCES: BL: [IB.9605.]. • BMC XV: 2, 546 [IB 9605]. • Bonitz, H., *Index Aristotelicus*. 2. editio. Graz, Akademische Druck- und Verlagsanstalt, 1955. viii, 878 p. [Facsimile reprint of the 1870 edition.]. • GW: no. 2389. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 1777. • Hammer-Jensen, I., “Das sogenannte 4. Buch der ‘Meteorologie’ des Aristoteles,” *Hermes: Zeitschrift für klassische Philologie*, 50 (1915), 113-36. • Klebs, *Incunabula Scientifica*, 1938: no. 89.1. • Osler, *Incunabula Medica*, 1923: no. 30. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1263. • Proctor, *Index*, 1898-1906: no. 2601. • Riley, L.W., *Aristotle texts and commentaries to 1700 in the University of Pennsylvania Library; a catalogue*. Philadelphia, University of Pennsylvania Press, [1961]. 109 p., facsimis. [“First appeared in five installments in the University of Pennsylvania Library chronicle, XXII-XXIV (1956-1958)”]. • Schmitt, C.B. and D. Knox, *Pseudo-Aristoteles latinus. A guide to Latin works falsely attributed to Aristotle before 1500*, London, Warburg Institute, University of London, 1985. vii, 103 p. [Published as: *Warburg Institute surveys and texts*, 12]: no. 72. • Thorndike, L., “De lapidibus,” *Ambix*, 8 (1960), 6-23. [Historical review of Aristotle's ‘De Lapidibus’ from beginnings through the Renaissance.]. • Thorndike, *History of Magic*, 1923-58: 2, 266. • Wellmann, *Aristoteles de Lapidibus*, 1924. (Brandis) ADB. • DBA: I 135, 165-166; II 166, 260. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • NDB. • WBI.

239. — German, 1912 [German transl.].

Das | Steinbuch Des Aristoteles | Mit
Literatgeschichtlichen Untersuchungen | Nach

Der | Arabischen Handschrift Der Bibliothèque Nationale | Herausgegeben Und Übersetzt | Von | Dr. Julius Ruska | Privatdozent An Der Universität Heidelberg | [ornament] | Heidelberg 1912 | Carl Winter's Universitätsbuchhandlung.

8°: [i]-vi, [2], [1]-208 p. PAGE SIZE: 232 x 160 mm.

CONTENTS: [i-ii], Title page, verso publication information.; [iii], Dedication.; [iv]-vi, Foreword.; [1 pg], Errata.; [1 pg], Blank.; [1]-92, Historical investigation.; [93]-125, Arabic text from the Codex, Paris, 2772.; [126]-182, German translation with commentary.; [183]-208, Latin text from the Codex Leodiensis.

VERY SCARCE. Translation with extensive commentary of a work attributed to Aristotle in the Middle Ages, but now recognized as a false work of his. The text was translated by Julius Ferdinand Ruska from an ancient manuscript held in the Bibliothèque Nationale Libary of Paris. It is not an authentic Aristotle treatise but authored under his name in the ninth century, in the Syriac language (by Hunain ibn Innak[?]). An early edition of this work was published also in part ([4], 92 p.) as Ruska's *Habilitatsschrift Heidelberg*, 1911, with the title: "Untersuchungen über das Steinbuch des Aristoteles."

REFERENCES: *Isis*: 1 (197??), 266, 341-50 [review]. • NUC: 20, 627 [NA 0401680]. • Rhode, G., *Bibliographie der deutschen Aristoteles-Übersetzungen vom Beginn des Buchdrucks bis 1964*. Frankfurt am Main, Vittorio Klostermann, 1965: no. 116. • Sinkankas, *Gemology Bibliography*, 1993: no. 5639. • Thorndike, L., "De lapidibus," *Ambix*, 8 (1960), 6-23. [Historical review of Aristotele's 'De Lapidibus' from beginnings through the Renaissance.]. • Ullmann, M., "Der literarisches Hintergrund des Steinbuches des Aristoteles," (pp. ??-??) in: *Actas IV Congresso de Estudos Árabes e Islâmicos*, Lisboa, 1968.

Meteorologica

240. — Latin, 1474 [First edition].

Aristotle Opera.—Meteorologica. Libra I-IV. Padua, Laurentius Canozius for Johannes Philippus Aurelianus et fratres, VIII. Kal. Jul. [24 June] 1474.

2°: [a-c¹⁰ d⁴] (d4 blank); 34ℓ.; no pagination. Two columns, 51 lines to the page. PAGE SIZE: 436 x 275 mm.

EDITIO PRINCEPS. Extremely rare. The first printed edition of Aristotles collected works, consisting of *De Anima*, *Metaphysica*, *De Caelo*, *De Generatione*, *Meteorologica*, *Parva Naturalia*, & *Physica* appeared between 1472 and 1474 from the press of Laurentius Canozius in Padua. The *Meteora* (often spelled with an 'h', *Metheora*) presents in three books an investigation of "things aloft," and includes studies of the stars, comets, winds, the lower atmosphere, and then proceeds to an account of related phenomena like weather, tides, earthquakes, climatic changes. A fourth book is concerned with chemical change and the properties of matter and bares some measure in mineralogy. Ten diagrams illustrate the text and a map summarizes Aristotle's views on the habitable zones of the earth.



INCIPIT LEAF OF ARISTOTLE'S OPERA, 1472-4

The fourth book of the *Meteorologica* occupies a strange position in the list of the Stagirite's works. The first three books are concerned with meteorological phenomena as explained by the actions and affectivities of the moist and dry exhalations, and all such phenomena are ascribed to these agencies. Moreover, at the end of the third book a promise is made to furnish a study of the exhalations as they occur inside the earth. There two classes of matter are to be discussed, those bodies that are mined and those that are quarried. But the promised discussion nowhere appears in the extant works of Aristotle. However, around 1200 A.D. a fourth book began to appear in the manuscripts of the *Meteorologica*. Its writing was such that it was accepted as a genuine work of the master, but research in the early 20th century show conclusively that this fourth book is actually the "De Mineralibus" authored by AVICENNA.

Avicenna's work is partly a direct translation and partly a résumé of passages in from Avicenna's *Kitāb al-shifā'* (Book of the remedy). It was translated by Alfred of Sareshel in the 13th century. On the surface it describes the formation of minerals and mountains. From a scientific point of view, Avicenna's opinions on the formation of stone, rocks, and mountains are remarkably interesting in that they show an astonishing insight into the geological process. He is clear and concise in his remarks on the nature of minerals and in particular is ruthless in his criticism of the alchemists and their attempt to transmute the base metals into

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gold.

In this the first printing of all four books of Aristotle's *Meteorologica* there is contained a commentary by Averrões [see note below] on Book IV only.

Averrões. (BORN: Cordova, Spain, 1126; DIED: Morocco, 1198) *Arabian philosopher, astronomer & writer on jurisprudence.* Averrões (Arabic: Abul Walid Mahommed Ibn Achmed, Ibn Mahommed Ibn Rushd) was educated in his native city, where his father and grandfather had held the office of *cadi* (judge in civil affairs) and had played an important part in the political history of Andalusia. He devoted himself to jurisprudence, medicine, and mathematics, as well as to philosophy and theology. Under the Califs Abu Jacob Jusuf and his son, Jacob Al Mansur, he enjoyed extraordinary favor at court and was entrusted with several important civil offices at Morocco, Seville, and Cordova. Later he fell into disfavor and was banished with other representatives of learning. Shortly before his death, the edict against philosophers was recalled. Many of his works in logic and metaphysics had, however, been consigned to the flames, so that he left no school, and the end of the dominion of the Moors in Spain, which occurred shortly afterwards, turned the current of Averroism completely into Hebrew and Latin channels, through which it influenced the thought of Christian Europe down to the dawn of the modern era. Averroes' great medical work, "Culliyat" (of which the Latin title "Colliget" is a corruption) was published as the tenth volume in the Latin edition of Aristotle's works, Venice, 1527. His "Commentaries" on Aristotle, his original philosophical works, and his treatises on theology have come down to us either in Latin or Hebrew translations.

REFERENCES: Fobes, F.H., "Medieval versions of Aristotle's Meteorology," *Classical Philology*, 10 (1915), no. 3, 297-314. • GW: no. 2423. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 1696. • Hellmann, G., *Beiträge zur Geschichte der Meteorologie*. Berlin, Behrend, 1914-1922. 3 vols. ["Bibliographie der gedruckten Ausgaben, Uebersetzungen und Auslegungen der 'Meteorologie' des Aristoteles," 2 (1917), 3-45.; published as: *Veröffentlichungen des Königlich Preussischen Meteorologischen Instituts*, Nrs. 273, 296 and 315.]. • Horblit: no. 6 [title page reproduced]. • Klebs, *Incunabula Scientifica*, 1938: no. 91.1. • NUC: 536, 97. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1202. (Averrões) *Catholic Encyclopedia*: 2, ??, • DSB: 12, ?? [under Rushd].

241. Latin, 1489: Prim[us-Quartus] Metheoro[rum]. [Cologne, Heinrich Quentel, 30 May 1489].

Pt. 1: [1], lii, [1], xlviℓ.; pt. 2: [1], xxxii, [1]ℓ.; pt. 3: [1], xxxiv, [1]ℓ.; pt. 4: [1], xxxvi, [1], xliiiℓ. [222]ℓ.

VERY RARE. Section containing the 4 books of Aristotle's *Meteorologica* with Johannes Versor's [died c1485] commentary. The text was printed by Heinrich Quentel [died 1501].

REFERENCES: Goff: V-253. • Hain, *Repertorium Bibliographicum*, 1826-38: 16047*. • Hellmann, G., *Beiträge zur Geschichte der Meteorologie*. Berlin, Behrend, 1914-1922. 3 vols. ["Bibliographie der gedruckten Ausgaben, Uebersetzungen und Auslegungen der 'Meteorologie' des Aristoteles," 2 (1917), 3-45.; published as: *Veröffentlichungen des Königlich Preussischen Meteorologischen Instituts*, Nrs. 273, 296 and 315.]. • Proctor, *Index*, 1898-1906: 1295. • Thorndike, L., "Oresme and fourteenth century commentaries on the *Meteorologica*," *Isis*, 45 (1954), 145-52. [Treats manuscripts, but also discusses the authenticity of the texts and the authorship of various commentaries.]. • Walsh, *15th Century Printed Books*, 1991-2001: 434.

242. Latin, 1491: *Meteorologica*. [With the commentary, De reactione et De intensione et remissione formarum of Gaetanus de Thienis. Edited by Franciscus de Macerata and Petrus Angelus de Monte Ulmi]. Venice, Joannes and

Gregorius de Gregoriis, de Forlivio, 22 October 1491.

2°: a-b⁸ c-l⁶ m⁸; 78ℓ.; no pagination. Printed in red and black. Initial spaces, with guide letters. Leaf [m7v] (colophon): Expliciunt Comentaria super quattuor libros metheorou Aristotelis cu textu eiusdem: [et] duobus tractatibus de re actione: et intensioe [et] remissioe formarum dñi Gaitai de tienis vincentini arctium [et] medicine doctoris clarissimi: suma cu diligentia castigata [et] emendata per sacre theologie bachalarios fratrem Franciscum de macerata [et] fratrem Petrum angelu de monte vlni ordinis minoru. Venetijs ipressa cura solertissimo [rum] viroru Ioannis de forliuio [et] Gregorij fratrum Anno dñi. M.cccc.lxxxj. die xxij. Mensis octobris. Laus deo.

VERY RARE. Contains a commentary by Gaetano Tiene [1387-1465] on all four books of the *Meteorologica*, which has been edited by Macerata de Franciscus and Monte Ulmi de Petrus Angelus. The book itself was printed by Gregorio de' Gregori [fl. 1480-1528].

REFERENCES: BL: [IA.21036]. • BMC XV: 5, 342 [IA.21036]. • Goff: P-399. • GW: no. 2421. • Hain, *Repertorium Bibliographicum*, 1826-38: 12811*. • Hellmann, G., *Beiträge zur Geschichte der Meteorologie*. Berlin, Behrend, 1914-1922. 3 vols. ["Bibliographie der gedruckten Ausgaben, Uebersetzungen und Auslegungen der 'Meteorologie' des Aristoteles," 2 (1917), 3-45.; published as: *Veröffentlichungen des Königlich Preussischen Meteorologischen Instituts*, Nrs. 273, 296 and 315.]. • Proctor, *Index*, 1898-1906: 4526. • Walsh, *15th Century Printed Books*, 1991-2001: 1980.

243. Latin, c1492: *Meteorologia*. Libra 1-4. [Leipzig, Martin Landsberg, c1492.]

2°: A-I⁶; 54ℓ. 24 lines to the page.

VERY RARE. This incunbula edition of Aristotle's *Meteorologica* omits all commentary and presents the text in Latin.

REFERENCES: GW: no. 2420. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 1694.

244. Latin, c1496: *Meteorologica*. Libra I-IV. [With the commentary, De reactione et De intensione et remissione formarum of Gaetanus de Thienis and Quaestiones super meteorologica Aristotelis.]. Venice, Bonetus Locatellus, c1496.

2°: A-H⁸ I⁶ AA-GG⁸; 126ℓ.; [1]-70, 1-54, [2] p. Two columns, 52 lines per page.

EXTREMELY RARE. Reissue of the same text first printed in Venice in 1491 and containing the commentary by Gaetano Tiene [1387-1465] on all four books of the *Meteorologica*, which has been edited by Macerata de Franciscus and Monte Ulmi de Petrus Angelus.

REFERENCES: GW: no. 2422.

Secretis Secretorum

One of the chief characteristics of medieval literature is the degree to which anonymous and pseudonymous texts were diffused and read. The most striking example is the immense literature in a variety of languages which surrounds Alexander the Great's teacher, the philosopher Aristotle, to whom were attributed many different works with little or no claim to authenticity. In addition to the approximately forty genuine Aristotelian works known in Latin or vernacular versions during the Middle Ages, there were more than a hundred other works attributed to the master at some time during the same centuries. Some of the Latin versions are based upon Greek texts already attributed to Aristotle in Antiquity, others derive from Hebrew or Arabic roots, while others again seem to be original Latin works which became attached to the name of Aristotle at some time in their history. The most widely diffused of all these works is the one which bears the Latin title *Secretum Secretorum*. It enjoyed immense influence and the widest circulation from at least the tenth (and quite probably significantly before) to the seventeenth century, with more localized influence enduring even longer.

Not all of the *Secretis Secretorum* editions published under Aristotle's name contain the tract on mineralogy. In fact, apparently none of the dozen or so incunabula editions appear to include it. The first appearance of the work in a published edition of the *Secretis Secretorum* occurs in the 1501 edition.

245. — Latin, 1501 [First edition].

Aristotelis ... secretum secretorum ad Alexandrum / De regum regimine ... / Eiusdem designis tempestatum uentorum & aquarum. / Eiusdem de mineralibus / Alexandri aphrodisei ... de intellectu. / Auerrois ... de anime beatitudine. / Alexandri Achillini ... de Uniuersalibus. / Alexandri macedonis ... de mirabilibus Indiae / Ad Aristotelem / Woodcut.

2°: a-f⁶; 36 leaves, in double column. Fol. 36a (colophon): ... impressus Bononiae Impe / sis Benedicti Hectoris. / Anno. dñi. 1501 ... 26 / octob / Printer's mark. Title taken from the first folio.

VERY RARE. Edited by Alexandri Achillini [see note below], this text contains seven treatises on medicine and philosophy: *Secreta secretorum*; *De signis aquarum, ventorum et tempestatum*; *De mineralibus*; *Alexander Aphrodisei de intellectu*; *Averoes de beatitudine anime*; *Alexandri Achillini de universalibus* and *Alexandri Macedonis ad Aristotelem de mirabilibus Indie*. Four of these are pseudo-Aristotelian works, which were well known since the 13th century or earlier. The *Secreta secretorum* is here present in the translation of Philip of Tripoli; the *De signis aquarum, ventorum et tempestatum* on weather signs, was translated in the 13th century by Bartholomew of Messina; the third work by the pseudo-Aristotle is *De mineralibus* on gems; the fourth *Alexandri Macedonis ad Aristotelem de mirabilibus Indie* is a fictitious letter by Alexander the Great to his teacher Aristotle, describing the wonders of India and the East. Three other similar 'Indian tractates' are known, all of them connected with the romance of Alexander the Great at various points in history. All four of them were accepted during the later Middle Ages as reliable literary portraits of the Indians, especially of the Brahmans. They originated in the European culture, and became sources for later tellers and writers of fables. The three remaining treatises in the present work consist of a work by Alexander of Aphrodisias on the intellect, another by Averroes on the beauty of the soul, and a work by Achillini himself on universals.

The tract, "De Mineralibus", is based upon a manuscript translation made at the end of the 12th century by Alfred the Englishman [see note below] of Avicenna's work on minerals.

The origin of the Secret of Secrets is veiled in obscurity. All known versions go back to an Arabic original, *Kitab Sirr al-'asr*, r, of which the earliest extant fragment can be dated A.D. 941. The work itself claims, in the Proem, to have been translated from Greek into Syriac and from Syriac into Arabic by Yahya ibn-al-

Bitriq, a well-known ninth-century translator active in the period when the largest number of works was being translated from Greek into Arabic. While it is doubtful, though not impossible, that there was a Greek original, it is clear that the extant versions contain a good deal of Greek material, including a certain amount which derives from genuine Aristotelian doctrine. It also, however, contains much which certainly is traceable to Middle Eastern Islamic sources.

In structure the work takes the form of an extended letter from Aristotle to Alexander the Great, which was sent to the king while he was engaged in conquering Persia. It is thus parallel to a number of other extant letters, which purport to be epistolary exchanges between the two eminent figures, of which several exist in Greek. The Secret, as it has come down to us, evidently underwent a long period of gestation. It probably originated as a 'Mirror for Princes', a familiar medieval literary form in which a wise man (Aristotle) offers moral and political advice to an eminent political leader (Alexander). It thus contains much specific advice on how the king as handled the many requirements of his office. For example, it deals with how the king is to choose and manage his advisors, what diet he should follow, how he should dress, etc. The Secret, as it has come down to us contains much else besides. Probably through a long period of accretion it gradually became a sort of encyclopedic work comprising, in addition to its original moral and political component, much miscellaneous information on occult and pseudo-scientific subjects. Thus there are sections of astrology, physiognomy, alchemy, and magic, in addition to rather detailed medical sections.

All known versions derive from one of two Arabic versions, which are extant in a total of about fifty manuscripts. One of the versions is divided into either seven or eight books and is known as the Short Form in Manzalaoui's classification, while the other is in ten books and is known as the Long Form. It was ultimately translated into many different languages including Hebrew, Turkish, Latin, Russian, Czech, Croatian, German, Icelandic, English, Castilian, Catalan, Portuguese, French, and Italian. In some of these languages there are several versions, and in English there are as many as nine, though not all of them are complete. The Latin versions undoubtedly had the greatest fortuna and were the basis for later translations into European vernacular languages. The Russian translation, however, is from a Hebrew version.

There are two basic Latin versions, one made in the mid-twelfth century by John of Seville (Joannes Hispalensis) and extant in some hundred and fifty copies, the other made during the first half of the thirteenth century by Philippus Tripolitanus and surviving in more than three hundred and fifty manuscripts. These versions, both in their Latin form and in the many vernacular translations which came from them, were exceedingly widely read for more than four centuries in many different intellectual contexts. Among the major figures of the High Middle Ages who

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read the work carefully are Albert the Great and Roger Bacon, who wrote a Latin commentary on the Secret. Owing to its encyclopedic nature it was of interest to readers in many different fields ranging from political theory to alchemy, from physiognomy to popular moral philosophy.

Though much work has been done previously on many aspects of the Secret, we have by no means reached the stage where one can confidently place the work with its myriad ramifications in its proper historical context. Because it was transmitted in so many diverse cultures and in so many different linguistic and structural forms, to understand fully its overall historical position is beyond the capabilities of any single scholar. There are many unsolved problems of all sorts, ranging from the work's sources to the precise relationship between the various versions in many different languages.

Alessandro Achillini. (BORN: Bologna, Italy, 20 October 1463; DIED: Bologna, Italy, 1512) *Italian philosopher & classical scholar.* Achillini studied philosophy and medicine at the university of Bologna, where he became a celebrated lecturer both in medicine and in philosophy. From 1506 to 1508, he also taught at Padua. For his commentaries and editorial work, he was styled the second Aristotle. His philosophical works were printed in one volume folio, at Venice, in 1508, and reprinted with considerable additions in 1545, 1551 and 1568. He was also distinguished as an anatomist.

Alfred the Englishman. (BORN: ; DIED:) *English translator.* Also called Alfred of Sareshel and Alfred Angilicus, was one of the English scholastics who was especially important as a translator of (originally) Greek works from Arabic to Latin. His renderings of Aristotle's works occurred during the late 12th century.

REFERENCES: BL: [no copy listed]. • CBN: 4, 98. • Holmyard, E.J., "Arabic text of Avicenna's Mineralia," *Nature*, 117 (1926), 305. • NLM 16th Century Books (Durling): no. ???? • NUC: 536, 96 [NS 0275529]. • Ryan, W.F. and C.B. Schmitt, eds., *Pseudo-Aristotle, the Secret of secrets: sources and influences.* London, Warburg Institute, University of London, 1982. 148 p., illus. • Shaaber, *Sixteenth Century Imprints*, 1976: A-760. • Thorndike, L., "De lapidibus," *Ambix*, 8 (1960), 6-23. [Historical review of Aristotele's 'De Lapidibus' from beginnings through the Renaissance.]. • Thorndike, *History of Magic*, 1923-58: 2, 246-78. • Williams, S.J., *The secret of secrets: the scholarly career of a pseudo-Aristotelian text in the Latin Middle Ages.* Ann Arbor, University of Michigan Press, c2003. (Achillini) *Encyclopaedia Britannica*, 11th edition. • *Nouvelle Biographie Générale* (Hoefer). (Alfred the Englishman) DNB: 1, 285. • Haskins, C.H., *Studies in mediaeval science.* 2nd edition. London, Cambridge/Harvard University Press, 1927. xx, 411 p [pp. 128-34].

246. Latin, c1503: Aristotelis philosophorum maximi secretum secretorum ad Alexandrum opusculum. Eiusdem De regum regimine. Eiusdem De sanitatis conseruatione. Eiusdem De physionomia. Eiusdem De signis tempestatum. Eiusdem De mineralibus. Alexandri Aphrodisei clarissimi peripatetici De intellectu. Auerrois magni commentatoris De animae beatitudine. Alexandri Achillini Bononiensis De universalibus. Alexandri Macedonis in septentrione monarchae De mirabilibus Indiae ad Aristotelem. [Venetiis, 150-?]

2°: A-G[sharp], a-g[sharp] (verso blank); 56l. COLOPHON: Explicit septisegmentatum opus ab Alexandro Achillino ... ut non amplius in tenebris latitaret editus. Et impressus Venetiis per Bernardinum Venetum de Vitalibus.

VERY RARE. Edited by Alexandri Achillini. Reprint of 1501 edition.

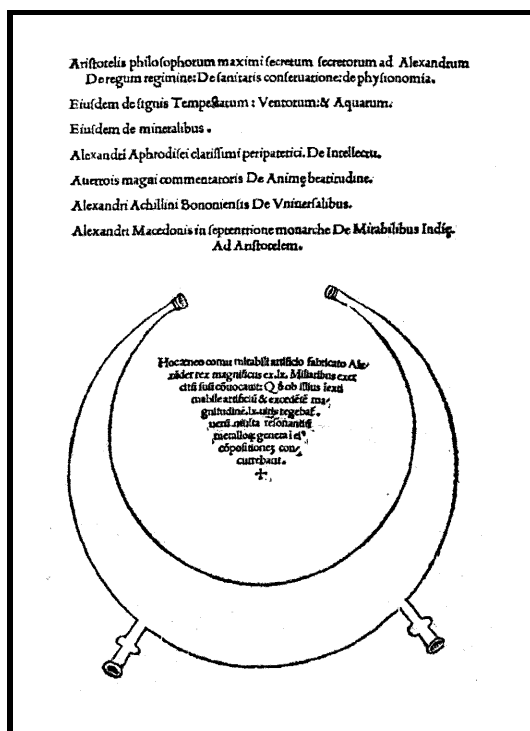
REFERENCES: NUC: 536, 96 [NS 0375500].

247. Latin, 1505: Utilissimus liber ari | stotelis de secre | tis secreto- | rum.

8°: a-e8 f4. [87] p. COLOPHON: Impressum in nobilissima ciuitate Burgen, per Andream de Burgos, cum maxima diligentia correptum, anno a natiui Domini millesimo quingentesimo quinto vicesima sexta die mensis junij]. Device of printer? beneath colophon.

RARE. Translated by Philippus Clericus.

REFERENCES: BL: [C.62.c.30].



ARISTOTELIS PHILOSOPHURUM, 1516

248. Latin, 1516: Aristotelis philosophorum maximi secretum secretorum ad Alexandrum | De regum regimine: De sanitatis conseruatione: de physionomia. | Eiusdem de signis Tempestatum: Ventorum: & Aquarum. | Eiusdem de mineralibus. | Alexandri Aphrodisei clarissimi peripatetici. De Intellectu. | Auerrois magni commentatoris De Animę beatitudine. | Alexandri Achillini Bononiensis De Vniuersalibus. | Alexandri Macedonis in septentrione monarche De Mirabilibus Indię. | Ad Aristotelem. | [...10 lines contained with the ornament of Alexander's horn...].

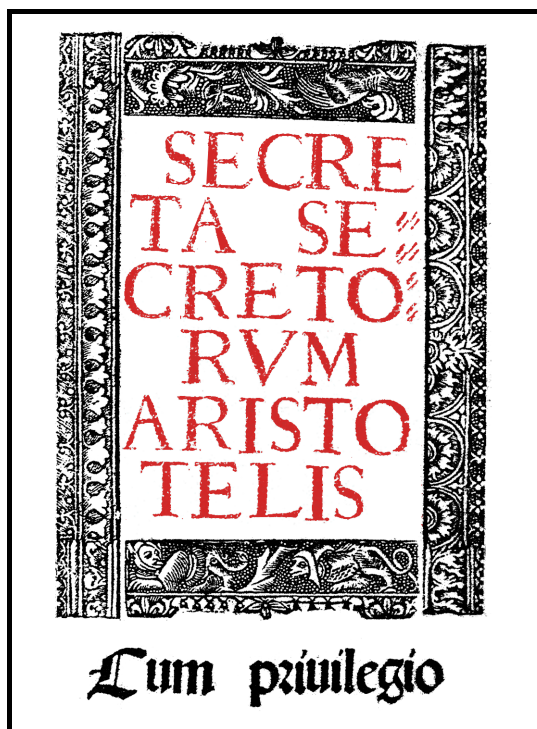
2°: 36l. Impensis Benedicti Hectoris: Bononię, 1516. Illustration on title page (Alexander's horn). Printer's device beneath colophon.

RARE. Edited by Alexandri Achillini. Reprints the text of of the 1501 edition.

REFERENCES: BL: [1482.f.21.]. • NUC: 536, 96 [NS 0375531].

249. Latin, 1520: [Contained within a black ornamental box:] [in red:] Sece | ta Se | creto | rvm | Aristo | Telis | [Below the ornamental box, in black:] Cum priuilegio.

12°: A-O8, Q4 (last blank); 115l.; [ij]-cxiii. [4] p. Title in red within black ornamental border; initials; printer's device on last page. Black letter. Numbered leaves printed on both sides. Leaves lxxix-lxxx and



SECRETUM SECRETORUM ARISTOTELIS, 1520

xcii erroneously numbered lxxxi-lxxxii and xc respectively. "Explicit septisegmentatum opus ab Alexandro Achillino ambas ordinarias & philosophie et medicine theorie publice docente: vt non amplius in tenebris latitaret editus [sic]": verso of leaf [cxiv]. COLOPHON: Explicit septisegmentatum opus ab Alexandro Achillino ... editus [sic]. Et impressus Parisiis Anno domini 1520.

RARE. Edited by Alexandri Achillini. Reprints the text of the 1501 edition.

REFERENCES: BL: [C.19.a.34.]. • NUC: 536, 97 [NS 0375510].

250. Latin, 1528: *Secreta secretorum Aristotelis*.— Maximi philosophi Aristotelis de Signis aquarum, ven orum et tempestatum.— Maximi philosophi Aristotelis de Mineralibus.— Alexandri Aphrodisei de Intellectu.— Ayerros de Beatitudine anime.— Alexandri Achillini, ... de Universalibus.— Alexandri Macedonis ad Aristotelem de Mirabilibus Indie. Lugduni, In ædibus Antonii Blanchard, anno dñi 1528 die xxij mensis Mart.

8°: A-K⁸ L⁴; 83ℓ.; [i]-lxxxiiijℓ., gothic characters. Title-page decorated with woodcut border, some woodcut initials and woodcut printer's device on verso last page. Imprint from colophon. COLOPHON: Explicit Septisegmentatum opus ab Alexandro Achillino ... Lugduni, Impressus in edibus Antonii Blanchard, 1528. Printer's device of Louis Martin on final p. Title within ornamental woodcut. Woodcut initials. border.

RARE. Edited by Alexandri Achillini. Reprints the text of the 1501 edition.

REFERENCES: Baudrier, *Bibliographie Lyonnaise*, 1895: 5, 104. • CBN: 4, 98. • *Index Aureliensis*: 107.903 [gives Antonius Blanchard as the printer]. • NLM 16th Century Books (Durling): no. 270. • NUC: 536, 97 [NS 0375513]. • Stillwell, *Awakening Interest in Science*, 1970: no. 578. • Thorndike, *History of Magic*, 1923-58: 5, 47-53.

251. Latin, 1555: *Secretvm | Secretorum | Aristotelis Ad Alexandrvm | Magnum, cum eiusdem Tractatu de | Animæ*

immortalitate nunc | primùm adiecto. | A Francisco Storella Alexanense Philosopho ad | ueterum exemplarium fidem eastigatum, atq; | pulcherrimis anntationibus illustratum. | Alexandri Magni ad Aristotelem epistola de | admirabilibus Indiæ, pre eundem Storellam castigata. | Accedvnt præterea duo Tractatus, scilicet Hippo= | cratis *Secreta secretorum*, & Auerrois *Libellus de Vene | nis*, Qui penè extincti, ab eodem Storella castigati iam al= | Orco reaocantur. | Ad Hectorem Pignatel= | lum Illustrß. Vibonensium Ducem. | [ornament].

8°: †-††⁴ A-R⁴; 76ℓ.; no pagination (i.e., [152] p.). COLOPHON: Mathiam [sic] Cancer Neapoli, 1555.

RARE. Edited by Franciscus Maria Storella [see note below], this is the best edited text of Aristotle's *Secretum* before modern scholarship. It is a rare edition, with only a handful of copies known to be extant. Moreover, there are two variants, one having a Naples and the other a Venetian imprint. The work is dedicated to Ettore Pignatelli, Duke of Monteleone, and contains a detailed preface, and annotations to the text.

The most significant improvement of the work is that Storella attempted in some measure to create a complete and critical text. He incorporated the information found in the Achillini edition of 1501 (reprinted 1516, 1520, and 1528). He also speaks explicitly of the abbreviated edition published by Franciscus Taegius at Pavia in 1516. Storella also claims to have used several manuscripts in preparing the text. However, Schmitt (1982) says: "On the whole Storella's efforts to improve the text seem to have been somewhat misguided and not really based on any overall understanding of how to go about it. Nevertheless, he made an attempt, and the text he printed was more complete than previous ones."

Franciscus Maria Storella. (BORN: Alessano, near Lecce, Italy, c1525; DIED: Naples, Italy, 1575) *Italian classical scholar*. Storella took a degree at Padua in 1549 and later taught at the universities of Salerno and Naples. He published a number of philosophical works, usually commentaries on ancient authorities.

REFERENCES: BL: [8463.aa.31.]. • NLM 16th Century Books (Durling): no. 297. • Schmitt, C.B., "Francesco Storella and the last printed edition of the Latin 'Secretum Secretorum' (1555)" (pp. 124-131), in: Ryan, W.F. and C.B. Schmitt, *Pseudo-Aristotle the Secret of Secrets, sources and influences*. London, The Warburg Institute, University of London, 1982. (Storella) Antonaci, A., *Francesco Storella: filosofo salentino de Cinquecento*. Galatina, 1966. [Published as: *Università di Bari, pubblicazioni dell'Istituto di Filosofia*, 9.].

German editions

252. German transl., 1530: Das aller edlest unnd bewertest Regiment der Gesundheit, auch von allen verporghen Künsten unnd Königlichen Regimenten Aristotelis, das er dem grossmechtigen König Alexandro zu geschriben hat. Auss arabischer Sprach durch Mayster Philipsen, dem Bischoff von Valentia ... in das Latein verwandelt. Nachmals auss dem Latein in das Teutsch gebracht, bey Doctor Johann Lorchner ... nach seinem Tod geschriben gefunden. Zu Auffenthaltung und Fristung in Gesundheit menschlichem Leben zu Gut durch Johann Besolt in Truck verordnet. [Augsburg, Heynrich Stayner] 1530.

4°: A³ B-M⁴ N²; [6], I-XLVIℓ., illus. VERY SCARCE.

CONTENTS: From Rhode (1965): [A1r], Title page.; [A1v], Vorrede.; A2r-A3v, Register=contents.; I-II, "Ein vorrede eynes Maysters, de das Buechlin einem König zugesandt hat, darinnen dann fast seere gelobet würdt der hochgeacht unnd natürlich Mayster Ar."; II-XLVI, Translation.

REFERENCES: BL: [1166.f.25.]. • NLM 16th Century Books (Durling): no. 298. • NUC. • Rhode, G., *Bibliographie der deutschen Aristoteles-Übersetzungen vom Beginn des Buchdrucks bis 1964*. Frankfurt am Main, Vittorio Klostermann, 1965: no. 189. • Shaaber, *Sixteenth Century*

ARNOLDUS SAXO

Imprints, 1976: A-761. • Wellcome Catalog (Books): 1, no. 457.

253. German transl., reissue, 1531: Das aller edlest und bewertest Regiment der Gesundtheyt, auch von allen verborgen Künsten unnd künigklichen Regimenten Aristotelis ... Auss arabischer Sprach durch Meister Philipsen, dem Bischoff von Valentia ... in das Latein verwandelt. Nachmals auss dem Latein in das Teütsch gebracht, bey Doctor Johann Lorchner ... nach seinem Tod geschriben gefunden. Zu Auffenthaltung unnd Fristung yn Gesundtheit menschlichem Lebenn zu Gutt durch Johann Besolt in Truck verordnet. [Augsburg, Heynrich Stayner] 1531.

4°: [6], I-XLVII^l., illus. VERY SCARCE.

CONTENTS: From Rhode (1965): [A1r], Title page.; [A1v], Vorrede.; A2r-A3v, Register=contents.; I-II, "Ein vorrede eynes Maysters, de das Buechlin einem Künig sugesandt hat, darinnen dann fast seere gelobet würdt der hochgeacht unnd natürlich Mayster Ar."; II-XLVIII, Translation.

REFERENCES: NLM 16th Century Books (Durling): no. 299. • NUC. • Rhode, G., *Bibliographie der deutschen Aristotles-Übersetzungen vom Beginn des Buchdrucks bis 1964*. Frankfurt am Main, Vittorio Klostermann, 1965: no. 190. • Wellcome Catalog (Books): 1, no. 458.

254. German transl., reissue, 1532: Das aller edlest unnd bewertest Regiment der Gesundtheit, auch von allen verporgnen Künsten unnd Künigklichen Regimenten Aristotelis, das er dem grossmechtigen Künig Alexandro zu geschriben hat. Auss arabischer Sprach durch Mayster Philipsen, dem Bischoff von Valentia ... in das Latein verwandelt. Nachmals auss dem Latein in das Teutsch gebracht, bey Doctor Johann Lorchner ... nach seinem Tod geschriben gefunden. Zu Auffenthaltung und Fristung in Gesundheit menschlichem Leben zu Gut durch Johann Besolt in Truck verordnet. [Augsburg, Heynrich Stayner] 1532.

4°: [6], I-XLVIII^l., illus.

CONTENTS: From Rhode (1965): [A1r], Title page.; [A1v], Vorrede.; A2r-A3v, Register=contents.; I-II, "Ein vorrede eynes Maysters, de das Buechlin einem Künig sugesandt hat, darinnen dann fast seere gelobet würdt der hochgeacht unnd natürlich Mayster Ar."; II-XLVIII, Translation.

VERY SCARCE. Johann Lorchner, translator.

REFERENCES: NLM 16th Century Books (Durling): no. 300.

Marbodi liber lapidum seu de gemmis, varietate lectionis et perpetua annotatione illustratis a Iohanne Beckmanno. ... ad Aristotelis Auscultationes mirabiles ... (Gottingæ, 1799).

See: **Marbode**, Bishop Of Rennes.

ARNOLD, Edmund Samuel Foster. (BORN: 1820; DIED: 1907) *American physician.*

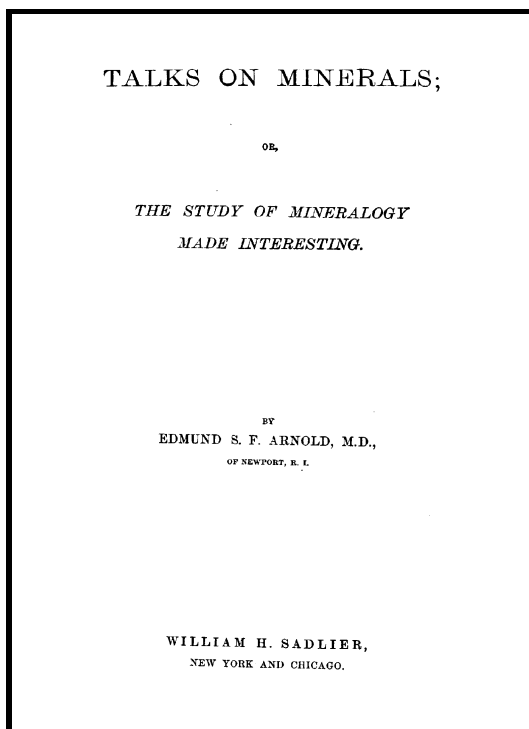
Arnold was a physician who lived and practiced medicine in Newport, Rhode Island.

REFERENCES: ABA: I 33, 16-19. • Atkinson, W.B., *A biographical dictionary of contemporary American physicians and surgeons*. Second edition, enlarged and revised. Philadelphia, 1880. • Kelley & Burrage, *American Medical Biography*, 1928. • WBI. • *Who Was Who in America*: 1, ??.

255. — English, 1883.

Talks on Minerals; | or, | the Study of Mineralogy | made Interesting. | By | Edmund S.F. Arnold, M.D., | of Newport, R.I. | William H. Sadlier, | New York and Chicago.

8°: [1]-111, [3], [iii]-viii p., 6 woodcut diagrams. PAGE SIZE: 227 x 138 mm.



TALKS ON MINERALS, 1883

CONTENTS: [1-2], Title page, verso blank.; [3]-17, "Introductory Address"—dated April, 1883.; [18]-98, Text.; [99]-105, "Questions on Familiar Talks.; [106], Blank.; [107]-111, "Supplement."; [2 pgs], Shows 6 diagrams of geologic cross sections.; [1 pg], Blank.; [iii], "The 'Students Complete Mineral Collection.'"; [iv], Blank.; [v]-viii, "Contents"—a list of minerals mentioned in the text.

RARE. Although the title page is undated, the introduction is dated 1883. This odd textbook on mineralogy provides a beginner an adequate introduction to rocks and minerals. It describes the basic properties of rocks and minerals. In conjunction with this work, a "Complete Student Mineral Collection" could also be obtained from the author.

REFERENCES: BL. • NUC: [no copy listed].

ARNOLDUS SAXO (Arnold of Saxony).

See: **Albertus De Saxonia.**

ARTINI, Ettore. (BORN: Milan, Italy, 29 August 1866; DIED: Milan, Italy, 7 March 1928) *Italian mineralogist.*

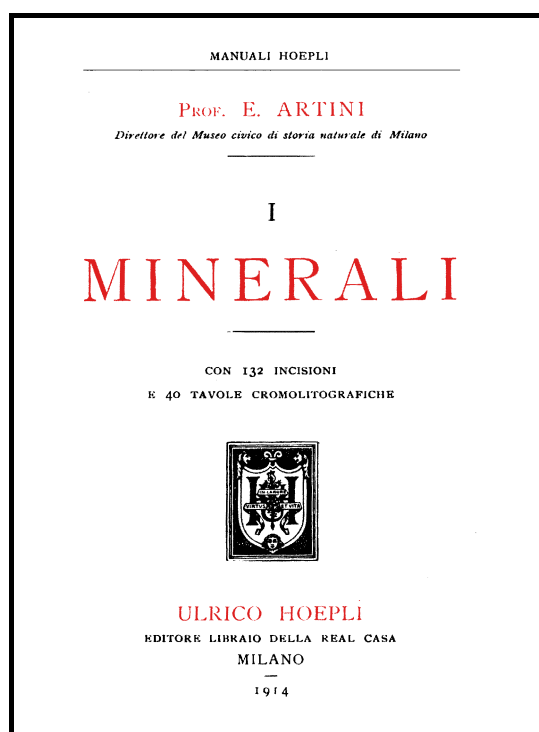
Artini studied at Padua and Florence, receiving his Ph.D. in science from Florence in 1887. He then became an assistant at the Mining Institute of the University of Pavia where he stayed until 1893. In 1911, Artini was appointed professor of mineralogy at the technical highschool in Milan and director of the mineralogical portion of the *Museo Civico di Storia Naturale*.

REFERENCES: ABI: II 26, 251. • *Boll. R. Uff. geol. Ital.*: 54 (1929), 16 p., portrait. • *Bollettino della Società Geologica Italiana Roma*: 47 (1928), CXLV-CLII, portrait. • *Dizionario Biografico Italiani*: 4, 356-6. • *Mineralogical Magazine*: 22 (1930), no. 131, 387-412, portrait. • Poggendorff: 4, 41, 5, 36 & 6, 80. • Repossi, E., "Gustavo Tschermak-Paolo von



ARTINI

Groth-Ettore Artini," *Atti Accad. Sci. Torino*, **68** (1928), 187 p. • Sarjeant, *Geologists*, 1980: **2**, 446. • WBI.



I MINERALI, 1914

256. — Italian, 1914 [First edition].

[In black:] Manuali Hoepli | [rule] | [in red:] Prof. E. Artini | [in black:] Direttore del Museo civico di storia naturale di Milano | [rule] | I | [in red:] Minerali | [in black, rule] | Con 132 Incisioni | e 40 Tavole Cromolitografiche | [vignette: rectangular coat of arms] | [in red:] Ulrico Hoepli | [in black:] Editore Libraio della Real Casa | Milano | [rule] | 1914.

8°: π^8 1-268 273; 219*l.*; [i]-xv, [1], [1]-422, 40 folding chromolithographic plates of minerals showing

169 specimens. Title in red and black. PAGE SIZE: 147 x 102 mm.

CONTENTS: [i-ii], Blank.; [iii-iv], Half title page, "I Minerali," verso blank.; [v-vi], Title page, verso "Proprietà Letteraria. Milano – Tipografia Umberto Allegretti – via Orti 2."; [vii-xi], "Indice Sistematico."; [xii], Blank.; [xiii-xv], "Prefazione."—signed Ettore Artini, February 1914.; [1 pg], Blank.; [1]-2, "Introduzione."; [3], "Parte Prima. Mineralogia Generale."; [4], Blank.; [5]-111, "Capitolo I. Proprietà morfologiche dei minerali."; [112]-154, "Capitolo II. Proprietà fisiche dei minerali."; [155]-177, "Capitolo III. Proprietà chimiche dei minerali."; [178]-185, "Capitolo IV. Giacitura dei minerali."; [186], Blank.; [187], "Parte Seconda. Mineralogia Descrittiva."; [188], Blank.; [189]-404, Descriptive mineralogy; 405-407, "Appendice."; [408], Blank.; [409]-422, "Indice Alfabetico."; [At end], 40 folding chromolithographic plates showing 169 figures.

VERY SCARCE. A popular and many times reprinted systematic Italian mineralogy. The author provides in the first half of the book sections which provide an overview of the science, definitions of terminology, descriptions of the crystal systems and crystal morphology, physical and chemical properties of minerals and the reasons why minerals are organized into the chemical-crystal systematic classification. The last half of the book is devoted to a descriptive mineralogy providing the standard information. An overall index finishes the text of the work. At the end are 40 chromolithographic plates showing a multitude of mineral specimens. These depictions are somewhat crude, but none the less they attempt to be faithful renderings of the specific species.

Other editions:

2nd, Milano, Hoepli, 1921. xxiii, [1], 518 p., 48 plates.

3rd, Milano, Hoepli, 1925. xxiv, 593 p., 48 plates.

4th, Milano, Hoepli, 1934. xxiv, 593 p., 48 plates.

5th, Milano, Hoepli, 1938. xxiv, 593 p., 48 plates.

6th, Milano, Hoepli, 1941 (reprinted 1945 & 1957). xvi, 596 p., 48 plates.

REFERENCES: *Bibliographie Géologique l'Italie*, 1881: 1, 471-72. • BL. • Dana's 7th (Bibliography): 65. • NUC: [no copy listed].

ASSO Y DEL RIO, Ignacio Jordán de. (BORN: Zaragoza, Spain, June 1742; DIED: 1804) *Spanish naturalist & lawyer.*

Educated with a classical education in Spain, Asso attended the Universities of Barcelona and Cerside, graduating with a law degree in 1764. Afterwards, he traveled in France, Italy, Holland and England. In 1776 he was appointed General Consul to Holland, and in 1787, France. He made repeated trips to the mountains of Aragon, making copious notes on the natural products he encountered.

REFERENCES: Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 49.

257. — Latin, 1784.

Introductio | In | Oryctographiam, | Et | Zoologiam | Aragoniæ. | Accedit | Enumeratio Stripium in eadem Regione novi- | ter detectarum. | [rule] | [... One line of quotation, signed Ovidius...] | [rule] | [ornament] | MDCCLXXXIV.

8°: [1]-192 p., 7 plates.

RARE. Attributed to I.J. de Asso y del Rio and published in Amsterdam by Sommer, this is an

AVICENNA

introduction to mineralogy and zoology of the region of Aragon in Spain. Although this title is not listed by Maffei & Rua Figuera, *Bibliografía Mineral* (1871-2, no. 140), a manuscript upon which this book is based is described.

REFERENCES: BL: [955.d.29.]. • BMC: 1, 55. • LKG: XIV 827. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: [no copy listed]. • Palau, *Manual*, 1948-77: 1, 538.

d'AUBENTON, Louis-Jean-Marie.

See: Daubenton, Louis-jean-marie.

AUBERT (Aubertus), Jacques. (BORN: Vendôme, France, 15—; DIED: Lausanne, France, 1586) *French physician.*

Aubert was a physician and doctor of philosophy. He wrote several works on medicine and one or two against Paracelsus and his followers.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 54. • Poggendorff: 1, col. 72.

258. — Latin, 1575.

Iacobi | Avberti | Vindonis De Me- | tallorum
ortu & causis con- | tra Chemilas beuis | & dilvcia
ex- | plicatio * | [ornament] | Lvgdvni. | Apvd
Iohannem | Berion. | 1575.

8°: A-D⁸ E³; 35ℓ.; [1]-69, [1] p., title vignette, head- and tailpieces.

CONTENTS: [1-2], Title page, verso blank.; 3-5, "In Cyclopes Chimi- | cos Tuffani Ducreti Me- | dici hexastichon."; [6], Blank.; 7-15, "Ad Lectorem beneuolum."; [16], Blank.; [17]-69, Text.; [1 pg], "Errata."

RARE. The causes and reasons for the formation of metals in the earth are briefly explained. A criticism of this work was published by JOSEPHUS DUCHESNE in 1575, which was translated into English and published in 1591.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 54. • Hoover Collection: no. 57. • LKG: III 25. • Roller & Goodman, *Catalogue*, 1976: 1, 58. • Wellcome Catalog (Books): 1, no. 514.

AUBUISSON DE VOISINS, Jean François d'.

See: D'aubuisson De Voisins, Jean François.

AVICENNA. (BORN: Afshana, near Bukhārā, 980 A.D.; DIED: Hamadhān, 1037 A.D.) *Arabic encyclopaedist, philosopher, physician, mathematician & astronomer.*

Avicenna (Arabic: Abū 'Alī al-Husain ibn 'Abdallāh ibn Sīnā) is the most famous scientist of Islam and one of the most famous of all races, places and times. He authored a great number of treatises in prose and verse, most of them in Arabic and a few in Persian. His philosophy roughly follows that of the Aristotelian tradition as modified by Muslim theology. His *Qānūn fi-l-tibb* (Canon of Medicine) is an immense encyclopedia of medicine, condensing the whole of ancient and Muslim knowledge, which had wide influence during the Middle Ages.

REFERENCES: *Catalogue of Portraits of Naturalists*: 132 [2 portraits listed]. • DSB: 15, 494-501. • *Jewish Biographical Archive*: 106, 225-262 / S13, 344-351. • Poggendorff: 1, col. 78. • Sarton, *Introduction*, 1928-52: 1, 709-13. • WBI.

259. — Latin, 1682.

Gebri, | Regis Arabum | Philosophi Perspi- |
cacissimi, | Summa perfectionis magisterii in |



AVICENNA

sua natura; | Ex Bibliothecæ Vaticanæ Exemplari
| undecunq; emendatissimo edita, | Cum vera
genuinaq; delineatione Vaso- | rum & Fornacum.
| Deniq; libri Investigationis Magiste- | rii &
Testamenti ejusdem Gebri, | ac | Aurei Trium
Verbo- | rum Libelli, | & | Avicennæ, Summi
Medici & acutis- | simi Philosophi, Mineralium
additio- | ne Castigatissima. | [ornate rule] | Gedani,
| Apud Brunonem Laurentium Tancken. | Anno M
DC LXXXII.

8°: [22], 278 [i.e., 272] p., 9 plates. Pages 113-118 omitted in numbering. Head- and tailpieces; initials. There is also an engraved titlepage reading: "Gebri, Regis Arabum Chymia."

RARE. An early Latin edition of Avicenna's *De Congelatione et Conglutinatione Lapidum* or *Mineralia* is included in this collection of alchemical writings, featuring Gebers *Summa Perfectionis*, *Liber Investigationis*, and *Testamentum*. Also contained in the volume the *Merlini Alegoria*, the *Expositio Epistolæ Alexandri*, Kallids *Liber Trium Verborum*, a letter by Faustus Sabaeus, and several other alchemical works and descriptions of the philosophers stone. Geber the European name given to JĀBIR IBN HAYYAN was allegedly an 8th-century Arab alchemist whose name is attached to hundreds of writings ranging from the 9th to 13th centuries. Although he did not author all of these works and in fact may not even have actually lived, the books authored in his name were the most advanced and influential alchemical texts of Islam. Many works later attributed to him, including the *Summa Perfectionis*, most probably were written by a later alchemist who wrote under Geber's reputation. This work that may be only translations of other Arabic texts became incorporated into Jābirs corpus, the influence of which became the greatest of any alchemical writings in the

West. Gebers advocacy of the sulphur-mercury theory of metals and his description of chemical methods became the premier impetuses of medieval alchemy and chemistry.

REFERENCES: *Bibliotheca Esoterica*: no. 1843. • BL: [14546.a.6.]. • Caillet, *Manuel*, 1912: no. 4424. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 240. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 300. • LKG: III 10.

260. — Latin & English, 1927 [English transl.].

Avicennae | De | Congelatione Et Conglutinatione Lapidum | Being Selections Of The | Kitâb Al-Shifâ' | The Latin and Arabic texts | edited | with an English Translation of the latter and with | critical notes | by | E.J. Holmyard, M.A., M.Sc., F.I.C., M.R.A.S., | Head of the Science Department, Clifton College, Bristol, | and | D.C. Mandeville, | Clifton College | Librairie Orientaliste | Paul Geuthner | 13, rue Jacob, Paris | 1927.

8°: [i]-viii, [2], [1]-85 p. PAGE SIZE: 214 x 140 mm.

CONTENTS: [i-ii], Half title page, "Avicennae | De | Congelatione Et Conglutinatione Lapidum," verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, "Preface.;" [1 pg], "Contents.;" [1 pg], Blank.; [1]-14, "Introduction.;" [15], Sectional title page, "English Translation of the Arabic Text.;" [16], Blank.; [17]-42, Text of Arabic translation.; [43], Sectional title page, "Text of the Latin Version.;" [44], Blank.; [45]-55, Text of Latin translation.; [56], Blank.; [57]-58, "Select Bibliography.;" [59]-63, "Index Of Persons.;" [64]-67, "Subject Index.;" [68], Blank.; [69]-86, Arabic text.

SCARCE. The "De mineralibus," appended, in medieval Arabic-Latin versions, to the fourth book of the *Meteorologica* of Aristotle. It is "partly a direct translation and partly a résumé" of passages in Avicenna's *Kitâb al-shifâ'* (Book of the remedy), made by Alfred of Sareshel.—*Introduction*.

The Avicenna contains a Latin Text, the Arabic Text, and an English translation, with considerable critical and introductory material. The text claims to be a book of Aristotle's "Physics," and on the surface it describes the formation of minerals and mountains, though the Arabic title, translated "The Book of the Remedy" points to certain secrets which must be embedded within.

From a scientific point of view, Avicenna's opinions on the formation of stone, rocks, and mountains are remarkably interesting in that they show an astonishing insight into the geological process. He is clear and concise in his remarks on the nature of minerals and in particular is ruthless in his criticism of the alchemists and their attempt to transmute the base metals into gold.

Facsimile reprint, 1982: New York, AMS Press, 1982. An unaltered reprinting of the 1927 text. ISBN: 0404184472.

Early printing of the Latin text, 1610: An earlier Latin edition appeared as: "Avicenna De Congelatione et Conglutinatione Lapidum; De Alchemia," in: *Artis Auriferae*, 1 (1610), pp. 240-245, 260-280 [Cf. NUC 27, 567, NA0528729].

REFERENCES: *Isis*: 9 (1924), ?? [review]. • NUC: 27, 567 [NA 0528731].

Avicenna's Mineralibus

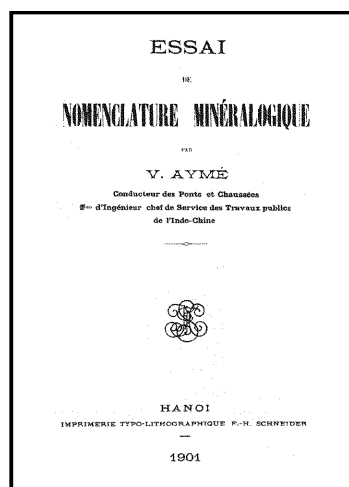
The text of Avicenna's *Mineralibus* was not generally recognized as his during the Middle Ages but was included instead with the writings of Aristotle. Therefore, when mechanical printing was introduced, the text was included with the *Meteorologica* and *Secretum Secretorum* of Aristotle.

Aristotle Opera.—*Meteorologica*. (Padua, 1472, and other editions).

See: Aristotle.

Aristotelis, philosophorum maximi, *Secretum secretorum* ... Ejusdem de *Mineralibus* ... (Boloniae, 1501, and other editions).

See: Aristotle.



ESSAI, 1901

AYMÉ, Victor.

261. — French, 1901.

Essai | De | Nomenclature Minéralogique | Par | V. Aymé | Conducteur des Ponts et Chaussées | ffons d'Ingénieur chef de Service des Travaux publics | de l'Indo-Chine | [ornate rule] | [ornament] | Hanoi | Imprimerie Typo-Lithographique F.-H. Schneider | [short rule] | 1901.

8°: [1]-36 p.

VERY RARE. This is a brief essay on the nomenclature of mineralogy. Perhaps the most interesting feature of this title is its imprint of Hanoi, Vietnam, when that region of southeast Asia was under French control.

REFERENCES: BL: [no copy listed]. • BMC: 6, 44. • NUC: 28, 84.

BABINGTON, William. (BORN: Port Glenone near Coleraine, Antrim, Northern Ireland, 1756; DIED: London, England, 29 April 1833) *Irish physician, chemist & mineralogist.*

BABINGTON



BABINGTON

In 1797, Babington began practicing medicine in London. He also was associated with Guy's Hospital, where he lectured on chemistry. Babington was a founding member of the Geological Society of London, of which he was also elected president in 1822. He was elected a Fellow of the Royal Society of London in 1805, as well as a Fellow of the Royal College of Physicians, and founder of the Hunterian Society in London. The mineral "Babingtonite" was named after him by A. Lévy in 1824.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 11. • BBA: I 50, 186-204; II 1268, 103-113. • *Dictionary of Irish Biography*. • DNB: 2, 315. • DSB: 1, 359-60 [by V. Eyles]. • Poggendorff: 1, cols. 82-3. • *Proceedings of the Geological Society, London*: 2 (1838), 42-4. • *Proceedings of the Royal Society of London*: 3 (1830-7), 227-8. • Sarjeant, *Geologists*, 1980: 2, 457. • Thomas, *Dictionary of Biography*, 1884: 245. • WBI. • Wills, *British Physicians in Geology*, 1935 [Babington is dealt with on pages 206-7.]. • Wilson, *History of Mineral Collecting*, 1994. • Woodward, *History of the Geological Society*, 1907: 6-11, portrait. • *World Who's Who in Science*: 82.

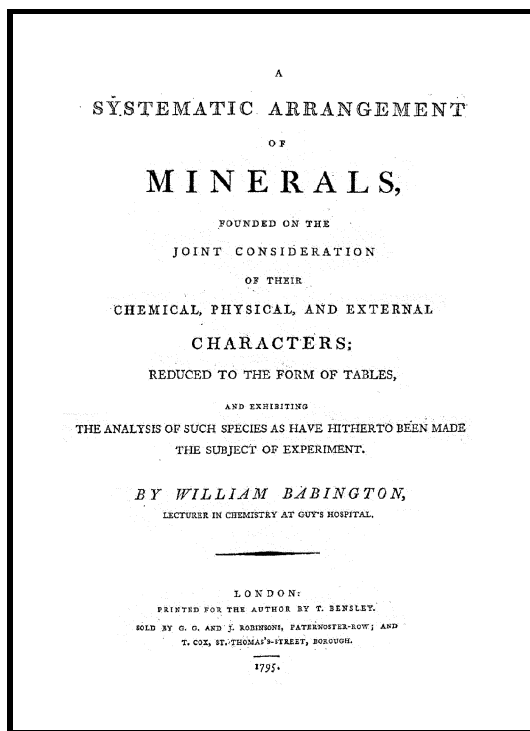
262. — English, 1795 [First edition].

A | Systematic Arrangement | Of | Minerals, | Founded On The | Joint Consideration | Of Their | Chemical, Physical, And External | Characters; | Reduced To The Form Of Tables, | And Exhibiting | The Analysis Of Such Species As Have Hitherto Been Made | The Subject Of Experiment. | By William Babington, M.D. | Lecturer In Chemistry At Guy's Hospital. | [ornate rule] | London: | Printed For The Author By T. Bensley. | Sold By G.G. and J. Robinson's, Paternoster-Row; And | T. Cox, St. Thomas's-Street, Borough. | [rule] | 1796.

2^o: [a]² B-G² H¹; 15ℓ.; [i]-iv, [1]-26 p. PAGE SIZE: 265 x 205 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Advertisement."; [1]-25, Text, consisting of a series of tables.; 26, "Appendix." and "Errata."

RARE. Babington purchased the the Earl of Bute's mineral collection, which was called one of "the finest, perhaps, which at that time existed in England." The



SYSTEMATIC ARRANGEMENT OF MINERALS, 1795

study of these minerals, and the various methods in which they could be classified lead the author to prepare his own collection catalog. It is the arrangement Babington adopted for this catalog that the tables of *A Systematic Arrangement of Minerals* are based.

REFERENCES: BL: [459.a.23.]. • Hoover Collection: no. 69. • NUC: 28, 512 [NB 0006156]. • Roller & Goodman, *Catalogue*, 1976: 1, 65.

263. 2nd edition, 1796: A | Systematic Arrangement | Of | Minerals, | Founded On The | Joint Consideration | Of Their | Chemical, Physical, And External | Characters; | Reduced To The Form Of Tables, | And Exhibiting | The Analysis Of Such Species As Have Hitherto Been Made | The Subject Of Experiment. | By William Babington, M.D. | Lecturer In Chemistry, And Assistant Physician At Guy's Hospital. | [double rule] | Second Edition. | [double rule] | London: | Printed For T. Cox, at his Medical Library, St. Thomas's-Street, Borough. | And Sold By C.C. and J. Robinson's, Paternoster-Row; | J. Johnson, St. Paul's Church-Yard; And Murray And Highly, Fleet-Street. | [double rule] | 1796.

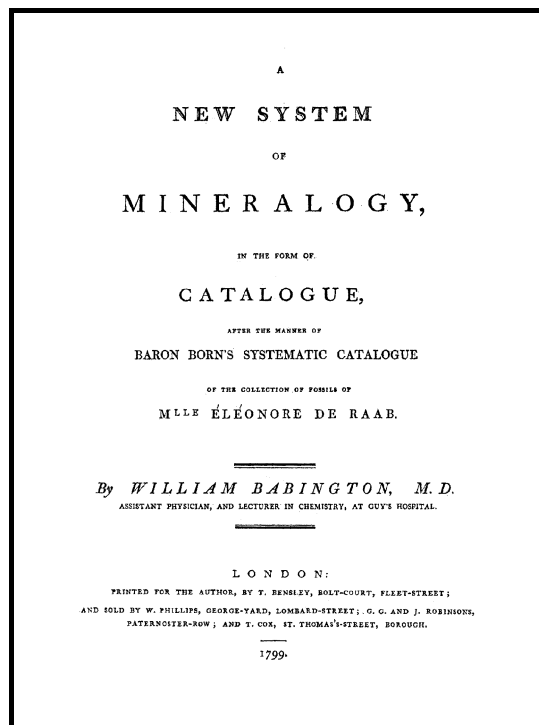
2^o: [a]² B-G² H¹; 15ℓ.; [i]-iv, [1]-26 p. PAGE SIZE: 265 x 205 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Advertisement."; [1]-25, Text, consisting of a series of tables.; 26, "Appendix." and "Errata."

RARE. Originally compiled for Babington's personal use to arrange his own collection of minerals. It is based upon the system of classification proposed in Baron Ignaz Edler von Born's *Catalogue Méthodique et Raisonné de la Collection des Fossiles de Mlle Éléonore de Raab* (2 vols., Vienne, 1790), with the classes, orders, genera and species being founded on chemical distinctions, while varieties are distinguished by external characteristics. "... The whole, therefore, meant to exhibit a comprehensive view of mineralogical arrangement, according to the latest and

best writers on the subject." The text of the work is a series of tables that have column headings of "Order," "Genus," "Species," "Variety" and "Analysis." Within the tables, the minerals are then grouped into the four classes: salts, earths, metals and inflammables. An appendix classifies volcanic productions.

REFERENCES: BMC: 1, 79. • LKG: XII 141. • NUC: 28, 512 [NB 0006157].



NEW SYSTEM OF MINERALOGY, 1799

264. — English, 1799.

A | New System | of | Mineralogy, | in the Form of | Catalogue, | After the Manner of | Baron Born's Systematic Catalogue | of the Collection of Fossils of | M^{lle} Éléonore de Raab. | [double rule] | By William Babington, M.D. | Assistant Physician, and Lecturer in Chemistry, at Guy's Hospital. | [double rule] | London: Printed for the Author, by T. Bensley, Bolt-Court, Fleet-Street; | and Sold by W. Phillips, George-Yard, Lombard-Street; G.G. and J. Robinsons, | Paternoster-Row; and T. Cox, St. Thomas's • Street, Borough. | [rule] | 1799.

4^o: [A]⁴ B-Z⁴ 2A-2N⁴ O² P²; 148ℓ.; [i-ii], [iii]-viii, [1]-279, [1] blank, [8] index p. Pages i-ii containing the half title were missing from all except one copy examined. PAGE SIZE: 264 x 202 mm.

CONTENTS: [i-ii], Half title page, "A | New System | Of | Mineralogy," verso blank.; [iii-iv], Title page, verso blank.; [v], Dedication to Sir John St. Aubyn, signed W. Babington, 1 October 1799.; [vi], Blank.; [vii]-viii, "Advertisement."; [1]-279, Text.; [1 pg], Blank.; [8 pgs],

"Index."—at end, "Printed by T. Bensley, Bolt-court, Fleet-street, London."

VERY SCARCE. In the advertisement, Babington writes that he wishes this work to be considered a continuation of his *A Systematic Arrangement of Minerals* (1st ed., London, 1795). Like its predecessor, *A New System of Mineralogy* also uses the mineral collection Babington had purchased from the Earl of Bute on which to form the basis for creating the classification. However, where the earlier publication contained a synopsis of the classification scheme with essentially no mineral descriptions, this work is essentially the expanded descriptive catalog of the specimens arranged according to the system.

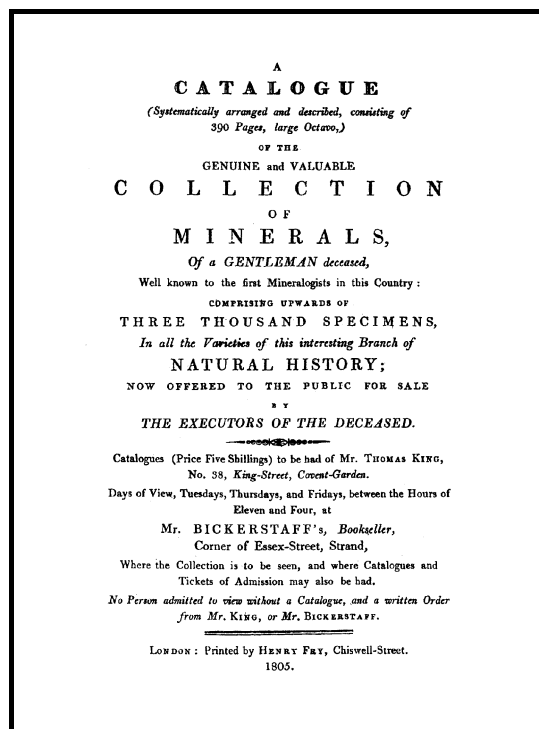
The work is dedicated to the mineral collector Sir John St Aubyn [see note below]. Babington's obligation to Baron Ignaz Edler von Born is expressed on the title page. In crystallization he was influenced by Jean-Baptiste Louis Romé de l'Isle, while most of his descriptions correspond with those of Johann Friedrich Wilhelm Widenmann and Ludwig August Emmerling. Richard Kirwan was relied upon for the chemical properties and analysis. Babington defines his classes, orders, genera, and species upon the chemical qualities, and his varieties on the external characters of minerals.

Sir John St Aubyn. (BORN: 1758; DIED: 1839) *English politician.* St Aubyn was educated at Westminster. He became sheriff of Cornwall in 1781, and a member of parliament from Truro, Cornwall in 1784. He was a Fellow of the Linnean and Royal Societies. His portrait was painted by Reynolds. St Aubyn purchased William Babington's mineral collection for the considerable sum of £3,000. After several subsequent acquisitions, including in 1799 Richard Greene's collection for £100, St Aubyn donated the bulk of the collection to the Civil and Military Library at Davenport in 1834. Through the years it was moved several times, eventually ending up in Plymouth in 1924. There the remains of it are today in the Plymouth City Museum.

REFERENCES: BMC: 1, 79. • DSB: 1, 359-60 [by V.A. Eyles]. • LKG: XV 28d. • *Nicholson's Journal*: 3 (1800), 428. • NUC: 28, 512 [NB 0006149]. • Smith, *Early Mineralogy in Great Britain*, 1978: 60. • Ward & Carozzi, *Geology Emerging*, 1984: no. 92. • Wills, *British Physicians in Geology*, 1935: 206-7. • Woodward, *History of the Geological Society*, 1907: 11. (St Aubyn) *American Journal of Science*: 1st Series, 40 (1840-1), 220. • Cleavelly, *World Palaeontological Collections*, 1983: 253. • DNB: 1, 121. • *Proceedings of the Geological Society, London*: 1840, 57-8. • *Report of the Royal Cornwall Polytechnic Society*: 4 (1921-2), 130. • Smith, *Early Mineralogy in Great Britain*, 1978: 53.

265. — English, 1805 [Sale catalog].

A | Catalogue | (Systematically arranged and described, consisting of | 390 Pages, large Octavo,) | Of The | Genuine and Valuable | Collection | Of | Minerals, | Of a Gentleman deceased, | Well known to the first Mineralogists in this Country: | Comprising Upwards Of | Three Thousand Specimens, | In all the Varieties of this interesting Branch of | Natural History; | Now Offered To The Public For Sale | By | The Executors Of The Deceased. | [ornate rule] | Catalogues (Price Five



CATALOGUE, 1805

Shillings) to be had of Mr. Thomas King, | No. 38, King-Street, Covent-Garden. | Days of View, Tuesdays, Thursdays, and Fridays, between the Hours of | Eleven and Four, at | Mr. Bickerstaff's, Bookseller, | Corner of Essex-Street, Strand, | Where the Collection is to be seen, and where Catalogues and | Tickets of Admission may also be had. | No Person admitted to view without a Catalogue, and a written Order | from Mr. King, or Mr. Bickerstaff. | [double rule] | London: Printed by Henry Fry, Chiswell-Street. | 1805.

8°: 318, 28, xxxvii p.

VERY RARE. The authorship of this catalog is attributed to Babington based upon a manuscript notation in the British Library copy. It describes a rich and varied collection of minerals, "selected with much Science and Expencc from several valuable Collections, especially the well-known Butean ... the Museum Geversianum and of Professor Gaubius in Holland ... together with an interesting Series of Specimens from Mont Blanc, collected by Mr. Voigt" (Address). The catalog follows the classification scheme outlined in Babinton's previously published works [see previous entries].

The whole collection is described as being contained in three Mahogany cabinets, each 6 feet tall, 2.5 feet wide and 1.5 feet deep, with 42 drawers in each cabinet. Specimens are fully cataloged including the

country locality. The collection was truly world wide in its nature, and the result of great enthusiasm on the part of the collector. Unfortunately, no reference has been found to specifically identify who this individual was. However, based upon the sheer size and variety of the collection, the compiler suspects it to be the product of the famous gentleman mineralogist William Withering [see note below].

William Withering. (BORN: Wellington, Shropshire, England, 28 March 1741; DIED: Larches near Birmingham, England, 6 October 1799) *English physician.* Withering graduated with his M.D. from the University of Edinburgh in 1766. In 1774, he then opened a medical practice in Birmingham. He was the first to describe native barium carbonate, later named after him as the mineral species, witherite. Withering is best known as a botanist, and his work on the foxglove is a classic. He was elected a Fellow of the Royal Society of London in 1784. He had collections of both minerals and plants.

REFERENCES: BL: [990.h.24.]. • NUC: [no copy listed]. (Withering) BBA: I 1187, 210-231. • DNB. • DSB: 14, 463-5 [by W.F. Bynum]. • Partington, *History of Chemistry*, 1961-70: 3, 299-300. • Poggendorff: 2, cols. 1343-4. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 198.



BACCI

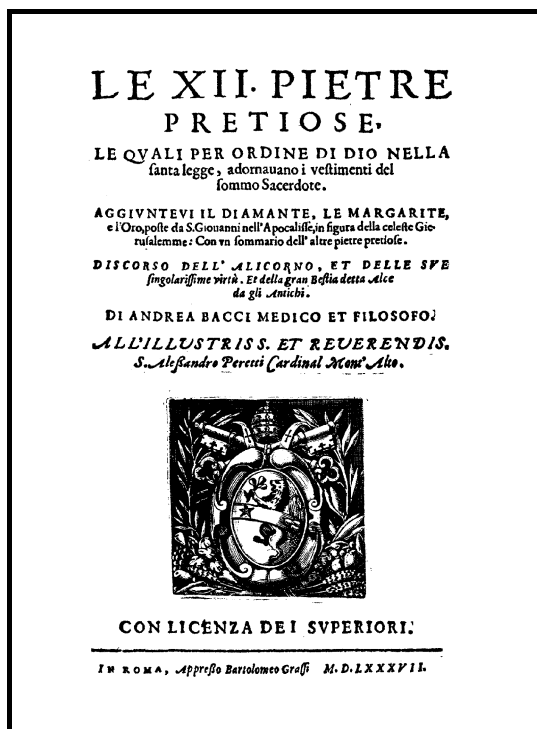
BACCI, Andrea. (BORN: St. Elpidio, Mark Ancona, Italy, 1550; DIED: Rome, Italy, c1600) *Italian physician & botanist.*

From 1567 to 1600, Bacci was a professor of botany at the University of Rome. There he lectured on poisons and described the curative properties of spas, mineral springs and baths. He was one of the personal physicians to Pope Sixtus V.

REFERENCES: ABI: I 88, 247-282; II S 6, 177. • *Catalogue of Portraits of Naturalists*: 135 [1 portrait listed]. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 83-4. • Thomas, *Dictionary of Biography*, 1884: 246. • WBI. • *World Who's Who in Science*: 82.

266. — Italian, 1587.

Le XII. Pietre | Pretiose, | Le Qvali Per Ordine Di Dio Nella | santa legge, adornauano i vestimenti del | sommo Sacerdote. | Aggiunteui Il Diamante, Le Margarite, | e l'Oro, poste da S. Giouanni nell' Apocalisse, in figura della celeste Gie- | rusalemme: Con vn sommario dell' altre pietre



LE XII PIETRE PRETIOSE, 1587

pretiose. | Discorso Dell' Alicorno, Et Delle Sve
| singularissime virtù. Et della gran Bestia detta
Alce | da gli Antichi. | Di Andrea Bacci Medico
Et Filosofo. | All' Illvstriss. Et Reverendis. | S.
Aleßandro Peretti Cardinal Mont' Alto. | [vignette]
| Con Licenza Dei Svperiori. | [rule] | In Roma,
Appresso Bartolomeo Grassi M.D.LXXXVII.

4°: †4 A-Q4 R6; 74ℓ.; [8], [1]-130, [10] p., printer's device on title page and verso of last leaf, ornamental initials and head- and tailpieces. COLOPHON: In Roma, Nella stamparia di Vincenzo Accolti, In Borgo nouo. M.D.LXXXVII. PAGE SIZE: 226 x 152 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], Dedication, dated 15 June 1587.; 1-130, Text.; [1 pg], "All' Illvstrissimo, | Et Reverendissimo | ..."; [1 pg], Blank.; [7 pgs], Table of contents.; [1 pg], "Registro."—with woodcut device and colophon.

VERY SCARCE. The twelve gemstones of the High Priest's breast plate are discussed in the first part of the text (pp. 1-37). This is followed (pp. 38-110) by a long discussion of unicorns, being an update of the author's previous *De Monocerate sive Unicornu* (Venetia, 1566). A description of large beasts concludes the text proper (pp. 111-130). A laudatory poem, table of contents and register with a woodcut device conclude the work.

Another issue, 1587: Same as the volume described but with the imprint on the title page, Rome, G. Martinelli, V. Accolti, 1587.

Wolfgang Gabelkhover. (BORN: Memmingen, Germany, 3 September 1539; DIED: Stuttgart, Germany, 31 December 1616) *German physician & naturalist*. Gabelkhover studied

natural history, philology and medicine. He was city physician in Göppingen, before being appointed house physician and historian at the court in Württemberg. He authored medical publications and a tract on the unicorn.

REFERENCES: (1587) Hoover Collection: no. 70. • Roller & Goodman, *Catalogue*, 1976: 1, 65. • Sinkankas, *Gemology Bibliography*, 1993: no. 280. • BL: [956.g.2.]. • Wellcome Catalog (Books): 1, no. 605. (Gabelkhover) *Nouvelle Biographie Générale* (Hoefer): 16, 213. • Poggendorff: 1, col. 826.

267. Latin transl., 1st edition, 1603: Andreae Baccii | Elpidiani | Philosophi, | Medici Et Civis Ro- | mani, De Gemmis Et Lapi- | dibus pretiosis, eorumq; viribus | & vsu tractatus, Italica lin- | gua conscriptus: | Nunc Vero Non Solym | in Latinum sermonem conuersus verum at- | iam utilissimis annotationibus & | obseruationibus auctior | redditus. | A Wolfgango Gabel- | chovero, Medicinæ Doctore | & Physico Calvvensi ordinario. | Cui accessit disputatio, de generatione auri in locis sub- | terraneis, illusq; temperamente. | [ornament] | Francofvrti | Ex officina Matthiæ Beckeri, impensis | Nicolai Steinii, | [rule] | Anno M. DC. III.

4°: A-Q8; 128ℓ.; [1]-231, [25] p., ornamental initials, head- and tailpieces.

VERY SCARCE. Translated by W. Gabelkover from *Le XII Pietre Pretiose* (Roma, 1587).

REFERENCES: BL: [987.b.30.]. • CBN: 6, col. 116. • Hoover Collection: no. 71. • Roller & Goodman, *Catalogue*, 1976: 1, 65. • Sinkankas, *Gemology Bibliography*, 1993: no. 281. • VD17: 39:117694Q. • Ward & Carozzi, *Geology Emerging*, 1984: no. 94. • Wellcome Catalog (Books): 1, no. 608.

268. Latin transl., 2nd edition, 1643: Andreae Baccii | Elpidiani | Philosophi, Me- | dici Et Civis Roma- | ni, De Gemmis Et Lapi- | dibus pretiosis, eorumq; viribus & | vsu tractatus, Italica lingua | conscriptus: | Nunc Vero In Latinum | Sermone conversus. | A Wolfgango Gabel- | chovero, | Medicinæ | Doctore. | [vignette] | Francofvrti, | Apud Johannem Davidem | Zunnerum. | [rule] | Anno M.DC. XLIII.

8°: A-P8 Q6; 126ℓ.; [1]-231, [23] p.

VERY SCARCE. Reprint of the 1603 edition.

REFERENCES: *Freilich Sale Catalog*: no. 30. • Sinkankas, *Gemology Bibliography*, 1993: no. 282.



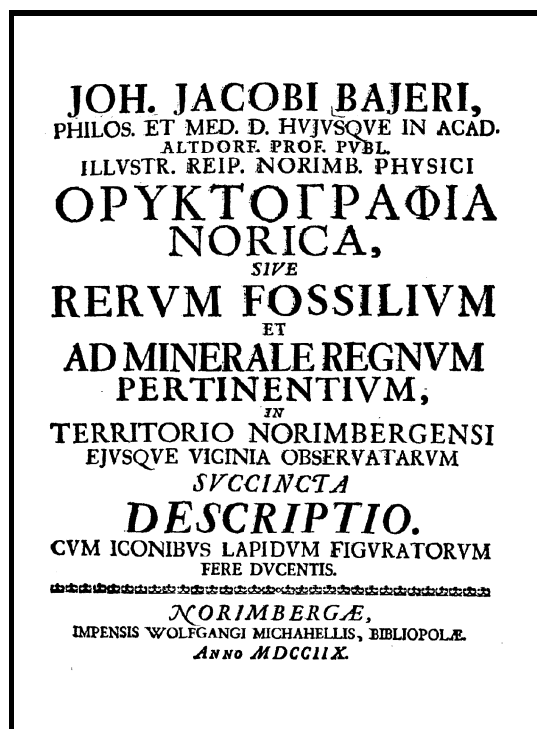
J.J. BAIER

BAIER

BAIER, Johann Jakob. (BORN: Jena, Germany, 14 June 1677; DIED: Altorf, Switzerland, 14 July 1735) *German physician & naturalist.*

Baier was the father of FERDINAND JACOB BAIER. He was educated at Jena and Halle, becoming professor of medicine at the University of Altorf, Switzerland in 1704. In 1731, he was appointed personal physician to the Emperor. Baier was elected a member and ultimately president of the Leopoldina Academy [Academy of Natural Scientists].

REFERENCES: ADB: 1, 774. • *Catalogue of Portraits of Naturalists*: 137-8 [5 portraits listed]. • DBA: I 50, 200-215. • Drugulin, *Sechstausend Portraits*, 1863: nos. 212-7. • DSB: 1, 392-3 [by B.v. Freyberg]. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 17. • NDB: 1, 543 [by A. Kreiner]. • Poggendorff: 1, col. 88. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 265-6. • Thomas, *Dictionary of Biography*, 1884: 256. • WBI. • Will, *Nürnbergisches Gelehrten-Lexicon*, 1755-1808. • *World Who's Who in Science*: 87.



ORYCTOGRAPHIA NORICA, 1708

269. — Latin, 1708 [First edition].

Joh. Jacobi Bajeri | Philos. et Med. D. Hvjsvqve in Acad. | Altdorf. Prof. Pvbl. | Illvstr. Reip. Norimb. Physici | OPYKTOΓPAΦIA | Norica, | sive | Rervm Fossilivm | et | Ad Minerale Regnvm | Pertinentivm, | in | Territorio Norimbergensi | Ejvsqve Vicinia Observatarvm | Svccincta | Descripto. | Cvm Iconibvs Lapidvm Figvratorm | Fere Dvcentis. | [ornate rule] | Norimbergæ, | Impensis Wolfgangi Michahellis, Bibliopolæ. | Anno MDCCLX.

4°: π^4)(1 A-M⁴ N³; 56ℓ.; [10], 1-102 p., added engraved title page, 6 folding plates (showing fossils, fossils shells and minerals), tables. PAGE SIZE: 194 x 156 mm.

CONTENTS: [2 pgs], Engraved title page, verso "In Frontem Libri."; [2 pgs], Printed title page, verso blank.; [4 pgs], Dedication, signed Joh. Jacobvs Bajervs.; [2 pgs], "Præfatio | Ad Lectorem."; 1-95, Text.; 96, "Syllabvs Capitvm."; 97-102, "Index."; [At end], 6 plates.

RARE. A classic work on the fossils and some minerals found in the region surrounding the city of Nürnberg in Germany. Baier's *Oryctographia Norica* was a new, systematic attempt to organize the natural mineral objects he found around his home city into a coherent classification. Baier did not believe in sweeping theoretical pronouncements, instead the specimens are fully described with many of the most interesting fossils depicted on the finely engraved plates. By this means he laid the foundation for the investigation of Jurassic fauna and of scientific paleontology in general and help disprove the notion that fossils were simple jests of nature. He clearly indicates that these fossils were created in the single act of the Deluge, which he considered the only great change since the Creation. The foundation Baier thus created, helped prepare the path for subsequent researchers to see the world differently and look past the myth and create through thorough observation the science of geology.

The frontispiece depicts a beach with putti presenting Cybele with baskets of ammonites, fossil echinoderms, belemnites, etc., while Neptune rides on a shell on the sea surrounded by naiads bearing baskets of shells; i.e. the affinities of the living and fossil forms. This and the six plates (which figure some 300 fossils) are the work of J.G. Puschner.

Baier clearly states in his foreword that supplemental volumes will appear to expand on the *Oryctographia Norica*, but time considerations in his life only allowed him to publish the rare 1730 supplement. However, at the time of his death, he had left material enough to allow his son Ferdinand to issue an additional supplemental volume in 1757. The publication of this, probably caused enough interest that the following year, 1758, Ferdinand issued what should be considered a rare second edition of the *Oryctographia Norica*, with a reworking of his father's original text, and a small number of plates.

German, 1958: An excellent modern German translation with extensive commentary of *Oryctographia Norica* and its 1730 supplemental volume appears in *Erlanger Geologische Abhandlungen*, 29 (1958), [1]-133 p. Besides a good introduction, there is included biographical information, much data of a historical interest, reproductions of the title pages, text figures and reproductions of the plates.

Ferdinand Jakob Baier. (BORN: Altorf, Germany, 13 February 1707; DIED: Ansbach, Germany, 23 October 1788) *German physician.* Baier was the son of JOHANN JACOB BAIER. He had a medical practice in Nurnburg, Germany. He was elected a member, later becoming president, of the Leopoldina Academy [Academy of Natural Scientists].

REFERENCES: BL: [458.a.11.]. • BMC: 1, 85. • Hoover Collection: no. 75. • LKG: XIV 92. • Nissen (ZBI): no. 189. • NUC: 30, 439-40 [NB 0037820]. • Roller &

Goodman, *Catalogue*, 1976: 1, 70. • Ward & Carozzi, *Geology Emerging*, 1984: no. 97. (Baier) DBA: I 50, 172-182. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 88. • WBI. • Will, *Nürnbergisches Gelehrten-Lexikon*, 1755-1808.

270. Supplement, 1730: Io. Iac. Baieri | [...7 lines of titles and memberships...] | Sciagraphia | Mvsei Svi | Accedvnt | Svpplementa | Oryctographiae | Noricae | Cvm Fig. AEn. | [rule] | Norimbergæ | Apvd Haeredes W.M. Endteri Et I.A. Engel- | brechti Vidvam | A.S.R. cIO IO CCXXX.

4°:)(2 A³ B-G⁴ H⁵; 34ℓ.; [2], [1]-64, [2] p., 3 plates (one folding).

CONTENTS: [2 pgs], Title page, verso blank.; [1-2], Dedication to Io. Henrico Linkio.; [3 plates]; [3]-26, Text.; 27-64, Text, "Svpplementa | Oryctographiae | Noricae."; [2 pgs], "Index."

VERY RARE. First supplement to *Oryctographia Norica* (Norimbergæ, 1708). It was published as a volume of the main orcale of the Leopoldina Academy to which Baier had been elected president in 1730. (see: *Acta Physico-Medica Academiae Cæs. Leopoldino-Carolinæ Naturæ Curiosorum*, 2 (1730)).

REFERENCES: BL: [726.c.2.]. • BMC: 1, 85. • Hoover Collection: no. 77. • LKG: XIV 93a. • NUC: 30, 339-40 [NB 0037826]. • Roller & Goodman, *Catalogue*, 1976: 1, 70. • Ward & Carozzi, *Geology Emerging*, 1984: no. 98.

271. 2nd suppl., 1758: Ioannis Iacobi Baieri | Monvmenta | Rervm | Petrificatarvm | Præcipva | Oryctographiæ Norica | Svpplementi Loco Ivngenda | Interprete Filio | Ferdinando Iacobo Baiero | Cvm Tabvlis Æneis Qvindecim. | [ornament] | [ornate rule] | Norimbergæ | In Commissione Georgii Lichtenstegeri | Calcographi | A.R.S. cIO IO CCLVII.

2°:)(2 A-E²; 12ℓ.; [4], [1]-20 p., 15 plates (6 folding).

CONTENTS: [2 pgs], Title page, verso "Senca de Tranquillitate Animi p.m. 148. | ..."; [2 pgs], "Præfatio"; [1]-20, Text.; [At end], 15 plates.

VERY RARE. "Johann Baier, the Altdorf professor, published in 1712 his *Oryctographica Norica*, one of the best works of the time, and in 1757 a supplement of fifteen folio plates was added under the direction of his son Ferdinand" (Zittle, 1901). Each plate is folded in half within the volume. The finely drawn plates are of fossil fish, molluscs and crustaceans.

REFERENCES: BL: [B.267*(.9.)]. • Hoover Collection: no. 74. • NUC: 30, 439-40 [NB 0037817]. • Roller & Goodman, *Catalogue*, 1976: 1, 70. • Ward & Carozzi, *Geology Emerging*, 1984: no. 99. • Zittel, *History of Geology*, 1901: p. 21.

272. 2nd edition, 1758: Ioannis Iacobi Baieri | Oryctographia Norica | Sive | Rervm Fossilivm | Et | Ad Minerale Regnm Pertinentivm | In | Territorio Norimbergensi | Eivsque Vicinia Observatarvm | Svccincta Descriptio | Cvm Svpplementis A. cIO IO CCXXX | Editis. | [vignette] | Recvsa Norimbergæ A.R.S. cIO IO CCLVIII. | In Commissione Wolffgangi Schwarzkopffii.

2°:)(2 A-R²; 36ℓ.; [4], [1]-65, [3] p., 8 plates (showing fossil shells), title vignette. PAGE SIZE: 370 x 214 mm.

CONTENTS: [2 pgs], Title page, verso "In Frontem Libri. | ..."; [2 pgs], "Lectori Benevolo."; [1]-65, Text.; [3 pgs], "Index."; [At end], 8 plates.

RARE. Edited by Ferdinando Jacobo Baier this appears to be a reworking of the original text of the *Oryctographia Norica*, together with a small number of previously published plates.

REFERENCES: BL: [B.267*(.8.)]. • BMC: 1, 85. • Hoover Collection: no. 76. • NUC: 30, 339-40 [NB 0037822]. • Roller & Goodman, *Catalogue*, 1976: 1, 70.

273. — Latin, 1760.

Ioannis Iacobi Baieri Epistolæ ad viros eruditos eorundemque responsiones historiam literariam et

IOANNIS IACOBI BAIERI
ORYCTOGRAPHIA NORICA
SIVE
RERV M FOSSILIVM
ET
AD MINERALE REGNV M PERTINENTIVM
IN
TERRITORIO NORIMBERGENSI
EIVSQVE VICINIA OBSERVATARVM
SVCCINCTA DESCRIPTIO
CVM SVPPLEMENTIS A. cIO IO CCXXX
EDITIS.



RECVSA NORIMBERGE A. R. S. cIO IO
IN COMMISSIONE WOLFFGANGI SCHWARZKOPFFII

ORYCTOGRAPHIA NORICA, 1758

physicam specialem explanantes curante filio Ferdinando Iacobo Baiero cum tab. ænea. Francofurti; Lipsiæ, Sumptibus Editoris, 1760.

8°:)(4 A-Gg⁸; 128ℓ.; [8], [1]-242, 6 p.

CONTENTS: [2 pgs], Title page, verso six lines of text.; [3 pgs], Dedication.; [1 pg], "Præfation."; [2 pgs], "Nomina | Virorum Celeberrimorum."; [1]-242, Text.; [6 pgs], Index.

RARE. Edited by Ferdinando Jacob Baier [1707-1788] the text reproduces some of the correspondence of Johann Jakob Baier.

REFERENCES: BL: [461.b.26.]. • LKG: VI 35. • NUC: 30, 439-30 [NB 0037813]. • Roller & Goodman, *Catalogue*, 1976: 1, 70.

BAIER, Johann Wilhelm. (BORN: Jena, Germany, 12 June 1675; DIED: Altorf, Switzerland, 11 May 1729) *German physicist & mathematician.*

Baier was professor of physics and mathematics at Altorf, Switzerland, later becoming professor of Lutheran theology at the same institution.

REFERENCES: *Catalogue of Portraits of Naturalists*: 138 [1 portrait listed]. • DBA: I 50, 228-233. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • LKG: 279. • Poggendorff: 1, col. 88. • Thomas, *Dictionary of Biography*, 1884: 256. • WBI. • Will, *Nürnbergisches Gelehrten-Lexikon*, 1755-1808.

274. Dissertation, 1705: Q.D.B.V. | De | Sapphiro | Scripturæ. | Occasione | Jobi XXVIII, 6. | In Ordine, quam vocant, | Circulari | Sub Præsidio | Joannis Guilielmi Baieri, | Phys. & Mathem. Prof. Publ. | publice disputabit | Sebastianus Jacobus Jugendres | Ad d. 7. Novembr. MDCCV. | H.L.Q.C. | [rule] | Altdorfi | Literis Jodoci Eilhelmi Kohles.

4°: A-B⁴; 8ℓ.; [1]-15, [1] p. PAGE SIZE: 204 x 165 mm.

BAKEWELL

CONTENTS: [1-2], Title page, verso blank.; [3]-15, Text.; [1 pg], Blank.

RARE. Sebastian Jacob Jugendres [1684-1765] was respondent. The text describes the significance of passages mentioning sapphire in the scriptures.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 56. • NUC: 30, 440-1 [NB 0037861]. • Poggendorff: 1, 88. • Sinkankas, *Gemology Bibliography*, 1993: no. 294.

275. — Latin, 1722.

Fossilia Diluvii universalis monumenta, præside J.G. Baiero ... sistet ... G.C. Eichler. Altorfii, literis Magni Danielis Meyeri, 1722.

4°: 34 p.

VERY SCARCE. Dissertation – G.C. Eichler, respondent.

REFERENCES: BL: [458.a.14.]. • BMC: 6, 48. • LKG: XIII 50 & 51. • NUC: 30, 440-1 [NB 0037861].

BAKEWELL, J.R.

276. — English, 1829.

An Introduction | to the | Study of Mineralogy; | or, | Students Pocket Companion. | [rule] | By J.R. Bakewell, E.S.Q. F.G.S. C.E. &c. | [rule] | London: | Printed for Sherwood, Gilbert, & Piper, | Paternoster-Row. | [rule] | 1829.

12°: [A]⁴ B-E¹² F⁸ G⁴; 64ℓ.; [i]-vii, [1], [1]-120, hand-colored frontispiece (“View at Cape D’Or, Nova Scotia.” and “Transverse section of a mine in Cornwall.”), errata tipped in before page 1. Plate II shows a longitudinal section of a copper and tin mine. PAGE SIZE: 187 x 108 mm.

CONTENTS: [i-ii], Title page, verso “London: Printed by R. Gilbert, St. John’s Square.”; [iii]-iv, “Prospectus.”; [v]-vii, “Preface.”—signed J.R. Bakewell, London June 1829.; [1 pg], blank.; tipped in errata sheet.; [1]-78, “An Introduction to the Study of Mineralogy.”; 79-96, “Classification of Minerals.”; [97]-110, “Tabular View of the Pellucid Gems arranged according to colour, with some of their more distinctive characters.”; [111]-112, “Description of the plates.”; 113-120, “An alphabetical index.”

RARE. A student’s pocket companion to mineralogical studies, embracing a condensed description of the properties, classification method, and a tabular view of gems, arranged according to color.

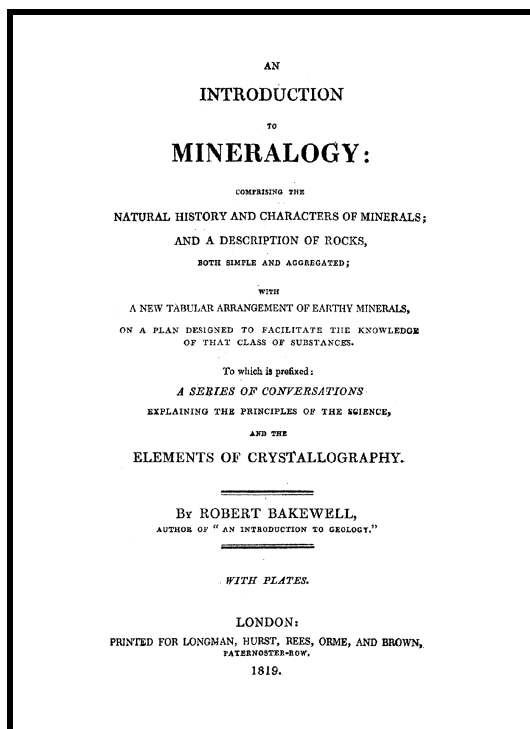
REFERENCES: Ward & Carozzi, *Geology Emerging*, 1984: no. 100.

BAKEWELL, Robert. (BORN: 1768; DIED: Hampstead near London, England, 15 August 1843) *English geologist.*

Bakewell made extensive mineralogical and geological surveys in England and Ireland, after which he lectured and exhibited sections of rock formations and the beginnings of a geological map of Britain. From 1820 to ’22, Bakewell traveled throughout France and Switzerland, extending his geological surveys. His published account of these travels, published in 1823, was a popular work with the public. He invented a safety furnace for preventing explosions in coal mines.

REFERENCES: *American Journal of Science*: 1st Series, 45 (1843), 403-4. • Barr, *Index to Biographical Fragments*, 1973: 13. • BBA: I 58, 232-235. • Cleavelly, *World Palæontological Collections*, 1983: 47. • DNB: 3, 23. • DSB:

1, 413 [by B. Hansen]. • *Encyclopaedia Britannica*, 11th edition. • *Geological Currents*: 2 (1980), 509. • Lambrecht & Quenstedt, *Catalogus*, 1938: 19. • Poggendorff: 1, col. 91. • Sarjeant, *Geologists*, 1980: 2, 467. • WBL. • *World Who’s Who in Science*: 95.



INTRODUCTION TO MINERALOGY, 1819

277. — English, 1819.

An | Introduction | to | Mineralogy: | comprising the | Natural History and Characters of Minerals; | and a Description of Rocks, | both simple and aggregated; | with | A New Tabular Arrangement of Earthy Minerals, | on a plan designed to facilitate the knowledge | of that class of substances. | To which is refixed: | A Series of Conversations | explaining the principles of the science, | and the Elements of Crystallography. | [double rule] | By Robert Bakewell, | Author of “An Introduction to Geology.” | [double rule] | With Plates. | London: | Printed for Longman, Hurst, Rees, Orme, and Brown, | Paternoster-Row. | 1819.

8°: A⁸ a² B-Z⁸ Aa-Tt⁸ Uu⁷; 345ℓ.; [i]-xx, [1]-668, [2] p., 5 plates (folding; show crystal drawings). PAGE SIZE: 208 x 130 mm.

CONTENTS: [i-ii], Title page, verso “Printed by Strahan and Spotiswoode, Printers-Street, London.”; [iii]-xvi, “Preface”—dated June 21, 1819.; [xvii]-xx, “Table of Contents.”; [1]-642, Text.; [643], “Addenda, No. I.”; [644]-654, “Addenda, No. II.”; [655], “Addenda, No. III. Double

Magnetism.”; [656], Blank.; [5 folding plates].; [657]-668, “Index to the Names of Minerals, and to the terms employed in Mineralogy and Crystallography.”; [2 pgs], “Explanation of the crystals presented in Plates III, IV, and V.”

SCARCE. In the preface, Bakewell gives an overview of the progress of mineralogy in Europe, emphasising the contributions of René Just Haüy and Abraham Gottlob Werner. He indicates this work should be used by students of mineralogy in England to help acquaint them with the science. The text is arranged into five books. Book I (pp. 1-198) covers preliminary observations and introductory theory in 10 chapters. Included is an overview of the classification system of Haüy that is used within the descriptive portion with some modification. Book II (pp. 199-465) reviews the essential characters of the earthy minerals, including on pages 202-219 a table of minerals arranged by specific gravity and on pages 220-231 a similar table arranged according to their hardness. An appendix to Book II takes up pages 466-498. Book III (pp. 499-616) concerns the metallic species. Book IV (pp. 617-634) describes the combustible minerals, and Book V (pp. 635-642) arranges the saline minerals. The five folding plates, numbered I-V are unsigned and mostly show crystal drawings.

REFERENCES: BL: [970.h.18.]. • BMC: 1, 90. • Roller & Goodman, *Catalogue*, 1976: 1, 73.

BALDASSARRI, Giuseppe. (BORN: Tomba, near Sarsina, Roumania, 1705; DIED: Siena, Italy, 5 September 1785) *Italian naturalist & physician.*

Baldassari was a doctor of medicine who operated a successful practice in Siena. He was also professor of natural history and botany at the city's university.

REFERENCES: ABI: I 95, 234-270. • *Biographie Universelle*: 2, 667. • De Tiplado, *Biografia degli Italiani*, 1834-45. • *Dizionario Biografico Italiani* [no listing]. • Jöcher, *Gelehrten-Lexikon, Supplement*. • LKG: 279. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • Poggendorff: 1, col. 93. • Thomas, *Dictionary of Biography*, 1884: 264. • WBI.

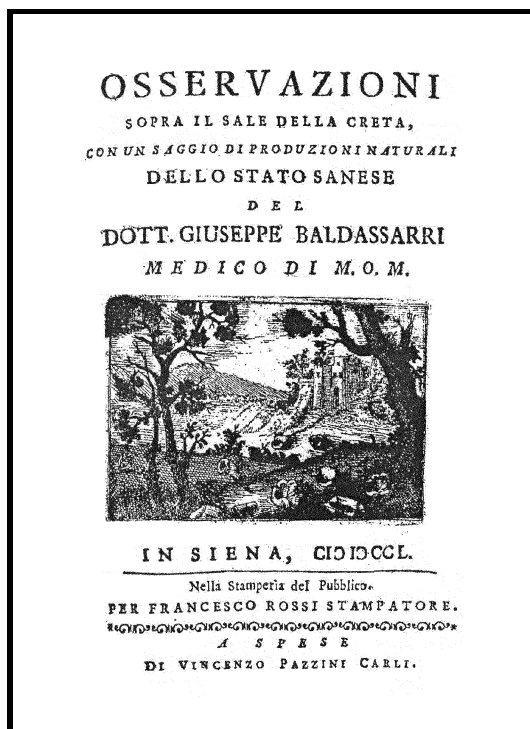
278. — Italian, 1750.

Osservazioni | Sopra Il Sale Della Creta, | Con Un Saggio Di Produzioni Naturali | Dello Stato Sanese | Del | Dott. Giuseppe Baldassarri | Medico Di M.O.M. | [rectangular vignette showing a castle in the distance from the vantage point of a forest] | In Siena, CIO IO CCL. | [rule] | Nella Stamperia del Pubblico. | Per Francesco Rossi Stampatore. | [ornate rule] | A Spese | Di Vincenzo Pazzini Carli.

[TITLE OF PART TWO READS:]

Saggio | Di | Produzioni Naturali | Dello Stato Sanese | Che Si Ritrovano Nel Museo | Del Nobile Sig. Cav.^{re} | Giovanni | Venturi Gallerani. | [rectangular vignette showing a castle in the distance from the vantage point of a forest] | In Siena, CIO IO CCL. | [rule] | Nella Stamperia del Pubblico. | Per Francesco Rossi Stampatore. | [ornate rule] | A Spese | Di Vincenzo Pazzini Carli.

2 parts in one volume. [Part 1] 8°: A-B⁸ C²; 18l.;



OSSERVAZIONI SOPRA, 1750

[1]-36 p., engraved title page vignette. [Part 2] 8°: A-B⁸; 16l.; [1]-32 p., engraved title page vignette. PAGE SIZE: 190 x 115 mm.

RARE. Presented as a letter to Saverio Manetti, professor and Secretary of the SOCIETÀ BOTTANICA DI FIRENZE. Part one deals with the natural history, geology, and mineralogy of the region of Siena, Italy, and particularly with salt, discussing its mineralogical, chemical and medicinal aspects. Part two consists of a catalog of the collection of natural history products of the state of Siena, formed by a local nobleman, Giovanni Venturi Gallerani. It describes 167 specimens, mostly minerals, fossils and stones, with extensive notes. The title pages of the parts would indicate that the work was also sold as two separate and independent volumes.

German, 1751: A translation into German of this work appears in *Hamburgische Magazin*, 10, 227-250 & 339-375.

REFERENCES: BL: [B.410.(5.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 43. • *Hamburgische Magazin*: 10, 227-250 & 339-375 [German translation of text]. • *Leipziger gelehrte Zeitung*: 1752, p. 779. • LKG: XIV 521. • NUC: 31, 688 [NB 0060464].

BANCALAIR, Gustav.

Bibliotheks-Katalog des Museum Francisco-Carolinum (Linz, 1897).

See: *Museum Francisco-carolinum*.

BANCROFT, Edward. (BORN: Westfield, Massachusetts, U.S.A., 9 January 1744; DIED: Margate, Kent, England, 8 September 1821) *English physician, naturalist & chemist.*

BANKS

Bancroft emigrated to England, c1770, where he made frequent contributions to the *Monthly Review*, with articles about America. He knew Benjamin Franklin and served as his secret agent in London at outbreak of American Revolution. A friend of Joseph Priestley [1733-1804], Bancroft made important discoveries in dyeing and calico-painting. He was elected a Fellow of the Royal College of Physicians and in 1783 to the Royal Society.

REFERENCES: ABA: I 61, 147-158; II 27, 353. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • BBA: I 62, 199-210; II 1276, 237. • DNB: 3, 105. • Drake, *Dictionary of American Biography*, 1872. • Herringshaw's *National Library of American Biography*. • Poggendorff: 1, col. 1532. • Thomas, *Dictionary of Biography*, 1884: 272. • WBI. • *World Who's Who in Science*: 103.

279. — English, 1769.

An | Essay | On The | Natural History | Of | Guiana | In South America. | Containing | A Description of many Curious Productions | in the Animal and Vegetable Systems | of that Country. | Together with an Account of | The Religion, Manners, and Customs | of several Tribes of its Indian Inhabitants. | Interspersed with | A Variety of Literary and Medical Observations. | In Several Letters | From | A Gentleman of the Medical Faculty, | During his Residence in that Country. | [rule] | [...2 lines of quotation, signed Seneca...] | [double rule] | London, | Printed for T. Becket and P.A. De Hondt | in the Strand. MDCCLXIX.

8°: π⁵ B-Z⁸ Aa-Cc⁸ Dd⁴; 209ℓ.; [6], [i]-iv, 1-402, [6] p., frontispiece (two-headed snake).

CONTENTS: [2 pgs], Half title page, "An | Essay | On The | Natural History | Of | Guiana, | In South America," verso blank.; [Frontispiece.]; [2 pgs], Title page, verso blank.; [1 pg], Dedication to William Pittcairn.; [1 pg], Blank.; [i]-iv, "Advertisement."; 1-402, Text.; [2 pgs], "Contents."; [4 pgs], Publisher's list.

SCARCE. One of the earliest and most informative accounts of the flora and fauna of the Guineas, this interesting work contains four letters providing information on (1) a general account of Guiana, its location, size, climate, soil, rivers, (2) a description of the animals, birds, fish, snakes, insects, (3) an account of the native religion, manners, customs, and (4) an account of the river Berbice and the Dutch settlements thereon, including descriptions of the slave trade and the government concluding with an account of the diseases. Included on pages 21-22 is a very short descriptive account of the minerals found in the region, making this the first topographical mineralogy of the area. The frontispiece shows a depiction of a two-headed serpent.

Facsimile reprint, 1971: New York, Arno Press, 1971. 8°: iv, 402, [6] p., frontispiece (two-headed snake). Reprint of the 1769 ed., with new introductory matter. [ISBN: 0405017294].

German, 1769: *Naturgeschichte von Guiana in Sud-Amerika. Worinn von der natürlichen Beschaffenheit und den vornehmsten Naturproducten des Landes, ingleichen der Religion, Sitten und Gebrauchen verschiedener Stamme der wilden Landes-Einwohner, Nachricht ertheilet wird. In vier Briefen. Von Eduard Bancroft, esq. Aus dem englischen...*

Frankfurt und Leipzig, J. Dodsley und Compagnie, 1769. 8°: [2], x, [2] 248 p., frontispiece.

Dutch, 1782: *Proeve over de Natuurlyke Geschiedenis van Guiana. In vier Brieven van Edward Bankroft ... Uit het Engelsch vertaeld en verrykt met de senmerkingen van den hoogdultschen, en eenige van den neêrduitschen overzetter. Utrecht, A. van Paddenburg, MDCCLXXXII. 8°: xvi, 327 p.*

Dutch, 1794: Amsterdam, G. Roos, 1794. 8°: xvi, 327 p. Reprint of the 1782 edition.

REFERENCES: (1769) BMC: 1, 95. • Garrison & Morton: no. 5304. • LKG: XIV 904. • NUC: 33, 132-3 [NB 0088686]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 467. • Roller & Goodman, *Catalogue*, 1976: 1, 76. • Sabin, *Dictionary*, 1868-1936: no. 3106. • Wellcome Catalog (Books): 2, 94. • Wood, *Literature of Vertebrate Zoology*, 1931: 220. • BL: [980.h.28.]. • (Dutch, 1782) NUC: 33, 132-3 [NB 0088696]. • Sabin, *Dictionary*, 1868-1936: no. 3108. • (Dutch, 1794) NUC: 33, 432-3 [NB 0088685]. • Sabin, *Dictionary*, 1868-1936: no. 3109. • (German, 1769) NUC: 33, 132-3 [NB 0088694]. • Sabin, *Dictionary*, 1868-1936: no. 3107.



BANKS

BANKS, Joseph, Sir. (BORN: 1743; DIED: 1820) *English naturalist.*

Banks was educated at Harrow, Eaton, and Christ Church, Oxford; studied natural history, and accompanied Cook in his expedition round the world in the *Endeavour*, 1768-71, — upon his return, created hon. D.C.L. of Oxford; built a large collection of natural history objects including minerals, which are now preserved at the British Museum; visited Iceland, 1772; made baronet, 1781; F.R.S., 1766; president of the Royal Society, 1778-1820; first to observe that almost all Australian mammals were marsupials and more primitive than placental mammals of other continents; great patron of science, where his house in Soho Square became a frequent meeting place; plant genus "Banksia" named in his honor.

REFERENCES: *Catalogue of Portraits of Naturalists*: 146-7 [32 portraits listed]. • DNB: 3, 129. • Poggendorff: 1, cols. 96-7 & 1532. • Thomas, *Dictionary of Biography*, 1884: 274. • *World Who's Who in Science*: 105.

Catalogus Bibliothecæ Historico-Naturalis Josephi Banks ... (Londini, 1796-1800).

See: Dryander, Jonas Carlsson.

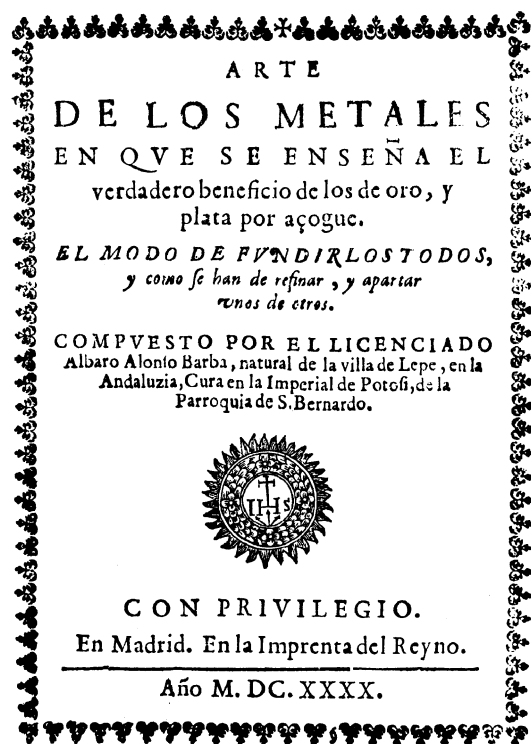
Letters from Iceland, containing Observations on the Civil, Litteral and Natural History, Antiquities, Volcanos, Basaltas. (London, 1780).

See: Troil, Uno Von, Archbishop Of Upsala.

BARBA, Alvaro Alonso. (BORN: Lepe, Huelva, Spain, 15 November 1569; DIED: Potosi, Peru [now Bolivia], 1662) *Spanish theologian.*

Barba entered church and became priest at Tarabuco, South America, c1609. He resided at Lepas, Peru, 1617. Then he became pastor of St. Bernards at Potosi, Columbia, a rich mining district. While there, Barba began studying the minerals, mining, and refining processes of the mines in the district. The whole of his knowledge he recorded in his *Arte De Los Metales* (1st ed., Madrid, 1640), which was kept as secret as possible by the Spaniards. He was the probable discoverer of process for extraction of gold, silver and copper by boiling ore with salt solution and mercury in copper vessel, c1607.

REFERENCES: ABE: I 94, 413-421; II 108, 79-111. • Barnadas, J.M., *Alvaro Alonso Barba (1569-1662): investigaciones sobre su vida y obra.* La Paz, Bolivia, Biblioteca Minera Boliviana, 1986. [i]-xvii, [1]-283 p., illus., facsim. [Published as: *Biblioteca Minera Boliviana*, no. 3; bibliography, p. 273-283.]. • DSB: 1, 448-9 [by C.S. Smith]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 70. • *ISIS*, 1913-65: 1, 108. • López Piñero, *Diccionario Histórico*, 1983: 1, ?? • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 61-6. • Picatoste, *Biblioteca Científica Española*, 1891: 21-3. • Poggenorff: 1, col. 97. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 269-70 & Suppl. 2 (1996), 1, 410. • WBI. • *World Who's Who in Science*: 107.



ARTE DE LOS METALES, 1640

280. — Spanish, 1640 [First edition].

[Contained within an ornamental border:] Arte | De Los Metales | En Qve Se Enseña El | verdadero beneficio de los de oro, y | plata por açogue. | El Modo De Fvndirlos Todos, | y como se han de

refinar, y apartar | vnos de otros. | Compvesto Por El Licenciado | Alvaro Alonso Barba, natural de la villa de Lepe, en la | Andaluzia, Cura en la Imperial de Potosí, de la | Parroquia de S. Bernardo. | [ornament] | Con Privilegio. | En Madrid. En la Imprenta del Reyno. | [rule] | Año M. DC. XXXX.

4^o: ¶⁴ A-P⁸; 124^l.; [8] p., Folios I-120, title vignette, text diagrams, ornamental initials and head-and tailpieces. The folios of the text are printed on the recto side only. PAGE SIZE: 194 x 140 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Suma del priuilegio."; [1 pg], "Aprovacion."; [1 pg], "Aprovacion De Los."; [1 pg], "Al svpremo Y Real Consoio. | de las Indias, el Presidente de | la Plata."; [2 pgs], "Al Señor Don Ivan de ..."; Folios I-115r, Text.; Folio 115v, Blank.; Folios 116-120r, "Indice De Los | libros, y capitulos continidos | en este tratado."; Folio 120v, Blank.

VERY RARE. The first significant book in Spanish on metals, minerals and mines of the New World. As a handbook on the mineral riches of the new territories, this title was banned by the Inquisition and severely limited in this its first printing, and consequently is a rarely encountered title. This book is complete with descriptions, practical directions, explanations, and illustrations of equipment for smelting gold, silver and copper. It was the first significant treatise on metals and minerals written in Spanish, and one of the few seventeenth century work's that was largely original. Barba advocated the laboratory control of the entire plant process, as well as computation of all costs associated with metal recovery. He describes in-depth his newly invented process of treating silver and gold ores with a mercury amalgamation in a copper vessel, to enhance metal recovery. It describes the fabulous wealth of the Spanish possessions in the New World, and as such the Spanish government attempted to keep Barba's book and methods secret. However, in 1669, the English ambassador, the Earl of Sandwich got a hold of a copy and published an English translation in 1670 that resulted in a large number of editions and translations. This work describes the amalgamation process used in Potosi, giving detailed accounts of ores and minerals of South America. Also covers the generation and origin of metals. The illustration shows a balance in a glass case, the first such illustration.

The editions of 1630 and 1639, recorded by many bibliographies, are probably due to printer's error for 1640, which is the first appearance of Barba's work.

Supplement, 1967: *Arte de los metales. Seguido de notas y suplementos al libro por un antiguo minero; juicios y comentarios.* Prologo de Armando. Potosi, Editorial "Potosi," 1967. xlvii, 299 p., illus., facsim.

Published as part of the series: *Coleccion de la Cultura Boliviana*, vol. 11, *Coleccion Primera, Los Escritos de la Colonia*, no. 3. It contains supplementary notes, written anonymously, that were first published in 1913 in the *Boletin of the Sociedad Geografica*.

Reprint, 1932: *Arte de los Metales en que se Enseña el Verdadero Beneficio de los de oro y plata por Acogue, el modo de Fundirlos todos, y como se han de Refinar, y Apartar unos de otros.* Madrid, Imprenta del Reyno, 1640. [Madrid, Impresa en la casa C. Bermejo, 1932]. 4^o: [12], 228 p.

Reprint, 1939: *Arte de los metales; en que enseña el*

BARBA

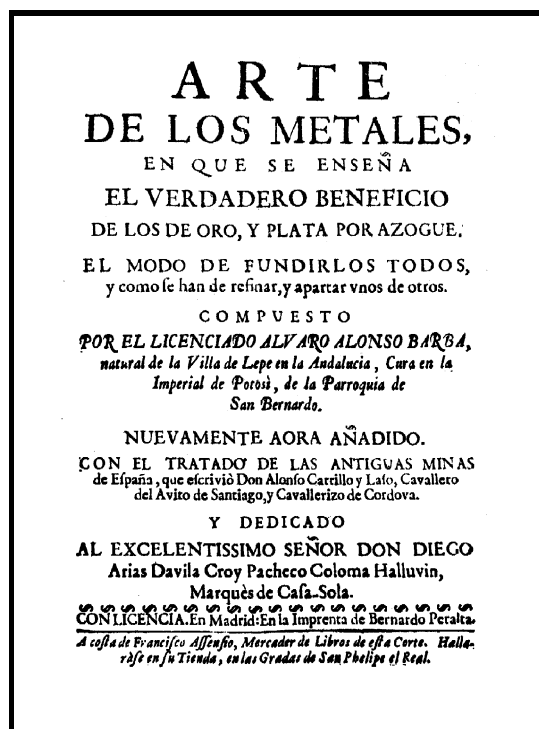
verdadero beneficio de los de oro y plata por azogue, el modo de fundirlos todos y como se han de refinar y apartar unos de otros. Compuesto por el licenciado Alvaro Alonso Barba ... La Paz, Bolivia, Imp. artistica, 1939. 8^o: 7, xix, 201 p., illus. Series: *Biblioteca Boliviana; Publicaciones del Ministerio de Educacion bellas Artes y Asuntos Indigenas*, no. 8. [Arizona State University Library, Tempe, TN144.B2 1939].

Reprint of the first edition of 1640, with a biography of Barba (p. [i]-xix) by Gustavo Adolfo Otero and notes on the importance of the work in Chile by Jacinto Nuñez.

Reprint, 1992: *Arte de los Metales ... Alvaro Alonso Barba*. Madrid, Consejo Superior de Investigaciones Cientificas, 1992. 228 p., illus. [ISBN: 840007226X].

Facsimile reprint of Barba's original book.

REFERENCES: (1640) Amorós, J.L., "Notas sobre la Historia de la Mineralogía y Cristalografía. IV. La Mineralogía española en la época del Barroco: Alonso Barba," *Boln. R. Soc. esp. Hist. nat. (Geologia)*, 61 (1963), no. 2, 167-86. • Calvo Rebollar, *Bibliografía Mineralogía Españolas*, 1999: 70-6. • *Freilich Sale Catalog*: no. 37. • Hoover Collection: no. 81. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, no. 177. • Medina, *Bibliotheca Hispano-Americana 1493-1810*: no. 1010 [suggests the date of '1630' in a copy at Upsala is a printer's error because Barba did not finish the manuscript until 1637]. • NUC: 34, 432 [NB 0106722]. • Palau, *Manual*, 1948-77: no. 23622 ["very rare"]. • Picatoste, *Biblioteca Científica Española*, 1891: nos. 21-3. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • Sabin, *Dictionary*, 1868-1936: no. 3253. • Thorndike, *History of Magic*, 1923-58: 7, 258-61. • BL: [444.c.3.(2.)]. • (Reprint, 1939) NUC: 34, 432-4 [NB 0106731].



ARTE DE LOS METALES, 1729

281. 2nd edition, 1729: *Arte | De Los Metales, | En Que Se Enseña | El Verdadero Beneficio | De Los De Oro, Y Plata Por Azogue. | El Modo De Fundirlos Todos, Y como se han de refinar, y apartar unos de otros. | Compuesto*

| Por El Licenciado Alvaro Alonso Barba, | [...3 lines of titles and memberships...] *| Nuevamente Aora Añadido. | Con El Tratado De Las Antiguas Minas | de España, que escribió Don Alonso Carrillo y Laso, Cavallero | del Avito de Santiago, y Cavallerizo de Cordova. | Y Dedicado | Al Excelentissimo Señor Don Diego | Arias Davila Croy Pacheco Coloma Halluvin, Marqués de Casa. Sola. | [ornate rule] | Con Licencia. En Madrid: En la Imprenta de Bernardo Peralta. | [rule] | A costa de Francisco Assensio, Mercader de Libros de est a Corte. Halla- | rase en su Tienda, en las Gradas de San Phelipe el Real.*

4^o: [4] p., 224ℓ., [4] p., 12 woodcut illus. PAGE SIZE: 216 x 146 mm.

RARE. Barba's scarce original text and illustrations on mining and metallurgy were reprinted here for the first time, almost ninety years after their first appearance. The publisher Francisco Assensio, in his dedicatory remarks, proclaims his purpose in issuing Barba's text is to assure the "perpetuity of its fame." Appended to Barba's work at page 192 is the second printing of another earlier work on the ancient mines of the Spanish empire, Alonso Carrillo y Laso's *Tratado de las Antiguas Minas de España* (1st ed., Madrid, 1624).

Carrillo y Laso's work, 1624: *De Las Antigvas | Minas De España. | Avtor Don Alonso Carrillo | Lasso, del Abio de Sanctiagio, Cauallerizo de Cordua. | Alserenissimo Infante D. Carlos. | [vignette: large coat of arms] | Con licentia, en Cordoua, Por Saluador de Cea. A. 1624. 8^o: [4], 54, [2] p.*

Alonso Carrillo Lasso. (BORN: c1582; DIED: Córdoba, Spain?, 1628) *Spanish lawyer.* Little is known of Laso, other than he was born the son of an illustrious lawyer and writer, Don Fernando.

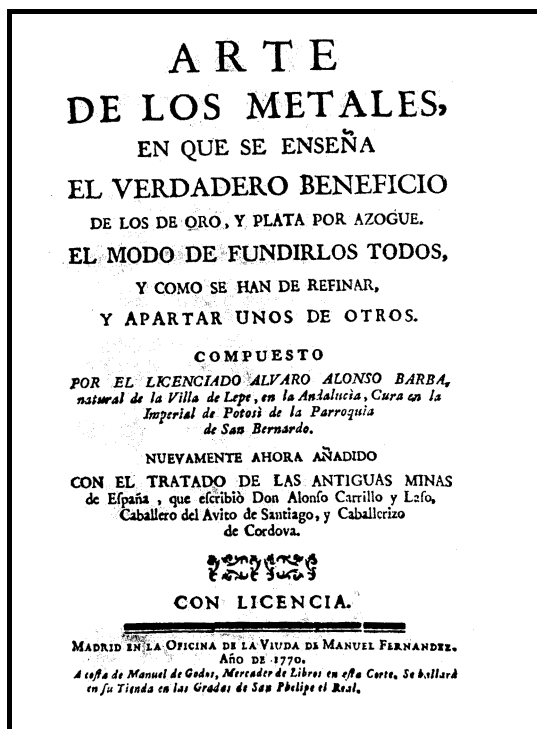
REFERENCES: (1729) BMC: 1, 96. • *Freilich Sale Catalog*: no. 38. • Medina, *Bibliotheca Hispano-Americana 1493-1810*: no. 2707. • NUC: 34, 432-4 [NB 0106724]. • Palau, *Manual*, 1948-77: no. 23623. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • BL: [457.c.14.]. • (Carrillo, 1624) Calvo Rebollar, *Bibliografía Mineralogía Españolas*, 1999: 66-7. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 132-3, no. 394. (Carrillo Lasso) ABE: III 136, 119-120. • López Piñero, *Diccionario Histórico*, 1983: p. 115. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 132-3. • WBI.

282. 3rd edition, 1770: *Arte | De Los Metales, | en que se enseña | el verdadero beneficio | de los de oro, y plata por azogue. | El Modo De Fundirlos Ttodos, | y como se han de refinar, | Y Aparta Unos De Otros. | Compuseto | Por El Licenciado Alvaro Alonso Barba, | natural de la Villa de Lepe, en la Andaluci, Cura en la | Imperial de Potosí de la Parroquia | de San Bernardo. | Nuevamente Ahora Añadido | Con El Tratado De Las Antiguas Minas | de España, que escribió Don Alonso Carrillo y Laso, | Caballero del Avito de Santiago, y Cavallerizo | de Cordova. | [ornament] | Con Licencia. | [double rule] | Madrid en la Oficina de la Viuda de Manuel Fernandez. | Año de 1770. | A costa de Manuel de Godos, Mercader de Libros en esta Corte. Se hallará | en su Tienda en las Gradas de San Phelipe el Real.*

4^o: [1]-228 (page 212 misprinted 112), [4] p., illus.

VERY SCARCE. Essentially, this is a reprint of the 1729 edition of Barba's original text, together again with Carrillo y Laso's *Tratado de las Antiguas Minas de España* (1st ed., Madrid, 1624).

Another issue, c1770: *Arte | De Los Metales, | En Que Se Enseña | El Verdadero Beneficio | De Los De Oro, Y Plata Por Azogue. | El Modo De Fundirlos Todos, | Y Como Se Han De Refinar, | Y Apartar Unos De Otros. | Compuesto | Por El Licenciado Alvaro | Alonso Barba, natural de la Villa de Lepe, | [...3 lines of titles and memberships...]* *| Nuevamente Ahora Añadido. | Con El Tratado De Las Antiguas Minas | de España, que escribió Don Alonso Carrillo y Laso, | [...2 lines of titles and memberships...]* *| [double rule] | Con Licencia. En Madrid, En La Oficina | de la Viuda de Manuel Fernandez.*



ARTE DE LOS METALES, 1770

| Acosta de Manuel de Godes, Mercader de Libros en esta Corte. | Se ballará en su Tienda en las Gradas de San Phelipe el Real. | [ornate rule]. 4^o: [1]-228, [4] p., illus.

This issue may precede the one dated 1770; however, with no date on the title page it is difficult to determine the sequence. It is essentially the same text as that dated 1770.

Reprint, c1925: México, Compañía Fundidora de Fierro y Acero de Monterrey, [c1925]. 4^o: [4], 228 p., illus. Facsimile reprint of the 1770 edition. A special edition of 1000 copies, none for sale, by the Compañía Fundidora de Fierro y Acero de Monterrey (The Iron and Steel Company of Monterrey, Mexico). The entire book is reproduced in facsimile from a copy in the possession of the National Museum of Mexico library. Of added interest is an historical-bibliographical essay of Barba's work in its many editions.

Reprint, 1939: Madrid, Escuela Especial de Ingenieros de Minas, 1939. 4^o: [19], 228 p., illus. Includes facsimile of title page and introductory material of the first edition.

REFERENCES: (1770) Hoover Collection: no. 82. • NUC: 34, 432-4 [NB 0106726]. • Picatoste, *Biblioteca Científica Española*, 1891: no. 53. • (Reprint, 1925) NUC: 34, 432-4 [NB 0106729]. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • (Reprint, 1939) NUC: 34, 432-4 [NB 0106730].

283. 4th edition, 1817: Arte | De Los Metales, | En Que Se Enseña | El Verdadero Beneficio | De Los De Oro Y Plata Por Azogue: | El Modo De Fundirlos Todos, | Y Como Se Han De Refinar | Y Apartar Unos De Otros. | Compuesto | Por El Licenciado Alvaro Alonso Bar- | ba, natural de la villa de Lepe en la Andolucía, cura | en la Imperial de Potosí de la parroquia de | San Bernardo. | Nuevamente Ahora Añadido | Con El Tratado De Las Aniguas Mi- | nas de España, que escribió Don Alonso Carrillo y | Laso, Caballero del habito de Santiago, y | Caballerizo de Córdoba. | Reimpreso Por El Real Tribunal De | Minería De Esta Capital, De Orden Del Excmo Sr

Virey. | Lima 1817. | [rule] | In La Imprenta de Los Huérfanos.

4^o: π^2 2-702 711; 141 ℓ .; [4], 1-271, [7] p., 12 half page copper engravings. PAGE SIZE: 192 x 126 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Aprobacio De Los Diputados De La | villa de Potosí / Prologo."; 1-271, Text.; [7 pgs], "Tabla De Los Capítulos Que Se ..."

RARE. First printing of Barba's text in the Americas, published for the Royal Tribunal of Mining in Lima by order of the Viceroy. Following Barba's text is Alonso Carrillos y Laso's *Tratado Curioso, Descripcion Breve de las Antiguas Minas de España* (1st ed., Cordova, 1624), the first time that this historical treatise was published in the New World.

Reprint, 1924: *Arte de los metales y descripcion general de los minerales existentes en las provincias que están bajo la Real audiencia de las Charcas y etras más. Compuesto por el licenciado Alvaro Alonso Barba ... Reimpresopor el Real tribunal do minería de esta capital de orden del ... Virrey.* Lima 1817. Copia fiel garantizada del original. Sucre, Tip. "Salesiana," 1924. 8^o: cover-title, ii, [3]-76 p. Reprints the first book of the Barba's *Arte de los Metales* (Lima, 1817).

REFERENCES: (1817) *Freilich Sale Catalog*: no. 39. • Medina, *Bibliotheca Hispano-Americana 1493-1810*: no. 325. • NUC: 34, 432-4 [NB 0106727]. • Palau, *Manual*, 1948-77: no. 23626. • Sabin, *Dictionary*, 1868-1936: no. 3253. • BL: [726.f.31.]. • (Reprint, 1924) NUC: 34, 432-4 [NB 0106733].

284. 5th edition, 1877: *Arte de los Metales ... comuesto por ... Alvaro Alonso Barba ... nuevamente abora añadido con el Tratado de las antiguas minas de España, que escribió Don Alonso Carrillo y Laso ... Santiago de Chile, Imprenta de la República de J. Nuñez, 1877.*

8^o: [1]-151 (i.e. 251) p., illus.

VERY SCARCE. Reset reprint edition of Barba's *Arte de los Metales* (1st ed., 1640) and Carrillo y Laso's *Tratado de las Antiguas Minas* (1st ed., Cardova, 1624).

REFERENCES: NUC: 34, 432-4 [NB 0106728].

English Editions

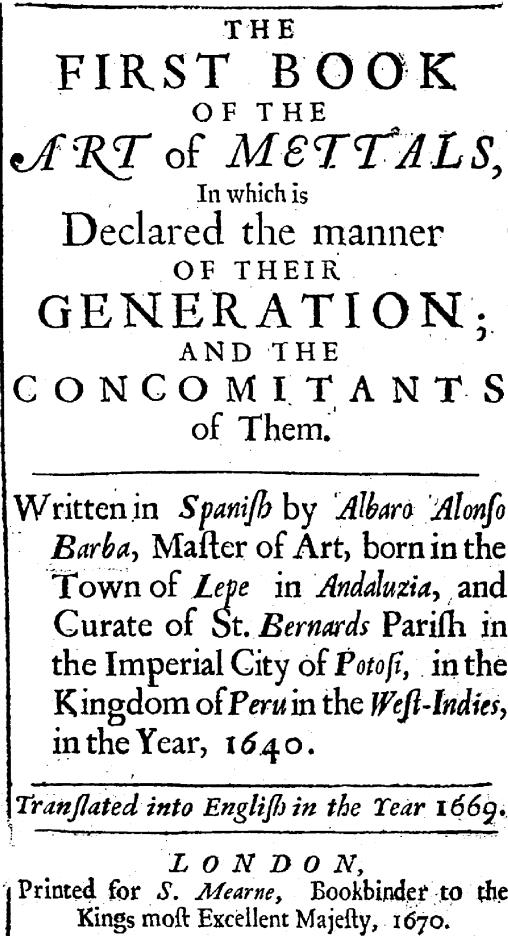
285. — English, 1670 [First edition].

[Contained within a single rule box:] The | First Book | Of The | Art of Mettals, | In which is | Declared the manner | Of Their | Generation; | And The | Concomitants | of Them. | [rule] | Written in Spanish by Albaro Alonso | Barba, Master of Art, born in the | [...5 lines of titles and memberships...] | [rule] | Translated into English in the Year 1669. | [rule] | London, | Printed for S. Mearne, Bookbinder to the | Kings most Excellent Majesty, 1670.

[TITLE PAGE OF SECOND BOOK READS:]

[Within a single rule box:] The | Second Book | Of The | Art of Mettals, | Wherein is | Taught the Common Way | Of | Refining Silver | By | Quicksilver, | With | Some New Rules | added for the | better performance of the same. | [rule] | Written in Spanish by Albaro Alonso | Barba, Master of Art, born in the | [...5 lines of titles and memberships...] | [rule] | Translated into English. | [rule] | London, | Printed for S. Mearne, Bookbinder to the | Kings most Excellent Majesty, 1670.

2 parts sometimes bound in one volume. [Part 1] 8^o: A-I⁸ K⁷; 79 ℓ .; [2], 1-156 p.; [Part 2] 8^o: A-E⁸



ART OF METTALS, 1670

F7; 47ℓ.; [2], 1-91, [1] p., one plate (page 88, showing furnaces).

CONTENTS: [Part 1] [2 pgs], Title page, verso blank.; 1-156, Text (errata, p. 156).

[Part 2] [2 pgs], Title page, verso blank.; 1-91, Text.; [1 pg], Blank.

RARE. Translated by the Right Honorable Edward, Earl of Sandwich from *Arte De Los Metales* (1st ed., Madrid, 1640). As ambassador to Spain, the Earl managed to obtain a copy of the suppressed Spanish original of Barba's important text on mining and metallurgy in the New World. He translated the first two of the five books, and had them published as two separate volumes. Unfortunately, the translator lacked technical knowledge, and the text is considerably flawed. None the less, it was this translation that was reprinted several times and used as the foundation for the German and French editions.

English, 1923: *El Arte De Los Metales* | (Metallurgy) | Translated from the Spanish of | Alvaro Alonzo Barba | By | Ross E. Douglass | And | E.P. Mathewson | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited | 1923. 8°: [i]-ix, [1], [1]-288 p., plates.

CONTENTS: [Plate: "Church of San Bernardo, Potosi

(Bolivia)...", verso facsimile reproduction of a Barba title page (odd c1770 edition)]; [i-ii], Title page, verso "Copyright, 1923."; iii-v, "Preface."; [vi], Blank.; vii-ix, "Table of Contents."; [1 pg], Blank.; [1]-276, Text of translation.; [277]-288, "Index."

SCARCE. English translation by Ross E. Douglass and E.P. Mathewson of the *El Arte De Los Metales* (Madrid, 1729). "Our aim has been to reproduce faithfully the phraseology of the author" (Preface). This is the only English translation of Barba's complete text. The 1670 translation was only of the first two books and is of little value since the Earl of Sandwich lacked technical knowledge.

Mountagu Edward, First Earl of Sandwich. (BORN: 1625; DIED: 1672) *English nobility & ambassador*. Sandwich was an admiral and general at sea, who distinguished himself at Naseby and the storming of Bristol in 1645. He resigned his command in 1659, but was reappointed in 1660. He sailed to Holland to convey Charles II to England. He was created Earl of Sandwich in 1660. He negotiated the marriage between Charles II and Catherine of Braganza, receiving the surrender of Tangier and conducting the queen to England in 1661. In 1666, he was appointed ambassador extraordinary to Madrid, where he successfully concluded a treaty with Spain. He was second in command of the fleet at the outbreak of war with the Dutch in 1672, and was subsequently blown up with his ship, when the fleet was surprised at Solebay. His body is buried at Westminster Abbey.

REFERENCES: (1670) NUC: 34, 432-4 [NB 0106741]. • Sabin, *Dictionary*, 1868-1936: no.. 3254. • Wing: B677. • BL: [987.b.25.]. • (English, 1923) NUC: 34, 432-4 [NB 0106732]. (Sandwich) BBA: I 779, 287-289. • DNB. • WBI.

286. 2nd edition, 1674: [Contained within a single rule box:] The | Art of Metals, | In which is | Declared the manner | of their | Generation, | and the | Concomitants | Of Them. | [rule] | In Two Books. | [rule] | Written in Spanish by Alvaro Alonso Barba, | Master of Art, Curate of St. Bernards | Parish in the Imperial City of Potosi, | in the Kingdom of Peru in the West- | Indies, in the Year, 1640. | [rule] | Translated in the Year, 1669. | By the R.H. Edward Earl of Sandwich. | [rule] | London: Printed for S. Mearne, Stationer to | the Kings most Excellent Majesty. 1674.

[TITLE PAGE OF PART TWO READS:]

[Within a single rule box:] The | Second Book | of the | Art of Mettals, | Wherein is | Taught the Common Way | of | Refining Silver | By | Quicksilver | with | Some New Rules added for the | better performance of the same. | [rule] | Written in Spanish by Alvaro Alonso Barba, | Master of Art, Curate of St. Bernards | Parish in the Imperial City of Potosi, | in the Kingdom of Peru in the West- | Indies, in the Year, 1640. | [rule] | Translated in the Year, 1669. | By the R.H. Edward Earl of Sandwich. | [rule] | London: Printed for S. Mearne, Bookbinder to | the Kings most Excellent Majesty, 1674.

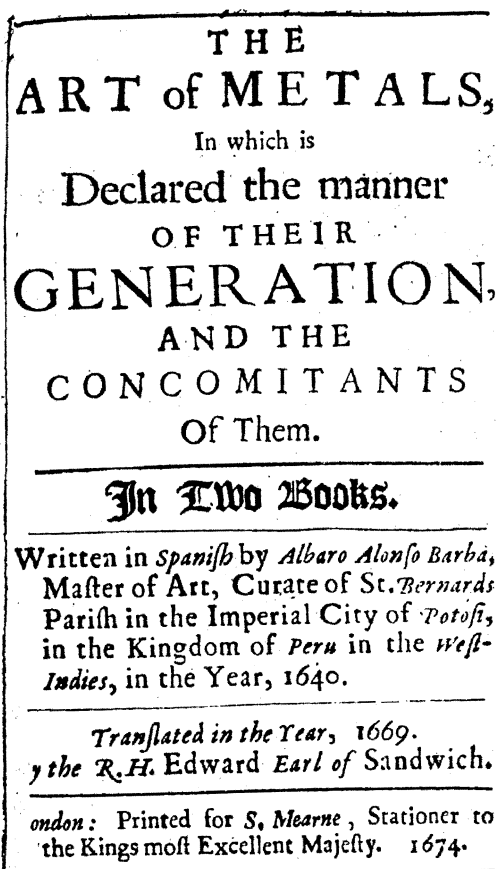
2 parts in one volume. [Part 1] 8°: A-K8; 80ℓ.; [4], 1-156 p.; [Part 2] 8°: A-E8 F7; 47ℓ.; [2], 1-91, [1] p., one plate (page 88, showing furnaces, 5 figs.). PAGE SIZE: 148 x 92 mm.

CONTENTS: [Part 1] [2 pgs], Title page, verso blank.; [2 pgs], "The | Preface."; 1-156, Text.;

[Part 2] [2 pgs], Title page, verso blank.; 1-91, Text.; [1 pg], Blank.

RARE. This popular book is here reprinted from the first English edition of 1670 with new title pages to both volumes, which are usually found bound together in this edition.

Although Duveen, amongst other bibliographers, calls this edition 'the first complete edition of the Earl of Sandwich's translation of the first American book on metallurgy', it is the second edition in English, the rarer issue with a collective title for both parts, instead of a title announcing the first book. It first appeared in English



ART OF METALS, 1674

in 1670, with the same collation, also printed by Mearne, having been published first in Spanish in 1640.

REFERENCES: BL: [446.a.25.(3.)]. • BMC: 6, 56. • Freilich Sale Catalog: no. 40. • Hoover Collection: no. 83. • Norman Catalog: 1, 1, no. 115. • Norman Sale Catalog: no. 269. • NUC: 34, 432 [NB 0106717 & 0106743]. • Palau, *Manual*, 1948-77: no. 23630. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • Sabin, *Dictionary*, 1868-1936: no. 3254. • Wellcome Catalog (Books): 2, p. 96. • Wing: B-678.

287. — English, 1738.

A | Collection | Of Scarce and Valuable | Treatises, | Upon | Metals, Mines, and Minerals. | [rule] | In Four Parts. | [rule] | Part I. and II. | Containing the Art of Metals, Writ- | ten originally in Spanish. By teh learned | Alvaro Alonso Barba, Director | of the Mines at Potosi, in the Spanish | West-Indies. Translated by the Earl of | Sandwich, in the Year 1669. | Part III. | Containing that Invaluable Piece of | Mr G. Platees, viz. a Discovery of | all Sorts of Mines from Gold to Coal. | Part IV. | Houghton's Compleat Miner. | [rule] | London, | Printed by C. Jephson, in West-Smithfield, | For Olive Payne, at Horace's Head in Round- | Court in the Strand. MDCCXXXVIII.

8°: [10], [1]-170, [9], [172]-215, [4], 1-66, [2] p., illus. Each part except the first has a special title page. Parts II-IV have the imprint, London, 1737-1738. Part IV has separate paging. Includes glossary. A publisher's advertisement (2 p.) occurs at the end.

CONTENTS: [Part 1] [2 pgs], Title page, verso blank.; [2 pgs], "The | Preface" followed by an advertisement.; [6 pgs], "The | Contents."; [1]-104, Text.

[Part 2] [105], Title page.; [106], Blank.; 107-170, Text.

[Part 3] [2 pgs], Title page, verso blank.; [4 pgs], "To The | Reader."—signed G.P.; [2 pgs], "The | Contents."; [1 pg], Advertisement of books for sale.; [172]-215, Text.

[Part 4] [2 pgs], Title page, verso blank.; [2 pgs], "To All | Miners | and | Maintainers Of Mines"—signed Thomas Houghton.; 1-60, Text.; 1 (i.e., 61)-66, "An | Explanation | of the | Miners | Terms of Art | Used in this | Book."; [2 pgs], "Books lately published."

SCARCE. This is a collection of three separate treatises concerned with mineralogy, mining and metallurgy that had each previously been separately published. The first edition of this collected edition was published in 1738. In 1739 and again in 1740, to meet public demand, the work was again reissued. Although not indicated in the text, chapters 1-60 are a translation of the first two parts of Barbas treatise and chapters 61-72 are a reprint of Plattes work.

[A]. Alvaro Alonso Barba. In 1640, the *Arte De Los Metales* was published at Madrid in a very small edition. It is the first description of the silver mines, minerals and metallurgical processes of the New World, primarily in the area of Bolivia and Peru. Contained therein are descriptions of how the rich veins formed and their look, taste and smell. Various properties of metals and stones are discussed together with observations on how other veins might be located, most particularly gold and silver. Copper, iron, lead, tin, mercury are also described. The work then goes into the various methods for the refining of the ores to pure metals, including the importance of sorting, grinding, roasting, and fluxes used when heating. The most important observation is Barbas announcement of a process for the extraction of gold, silver and copper by boiling ore with salt solution and mercury in a copper vessel. This was a discovery that allowed the mines of the New World to operate with greater efficiency in filling the Spanish treasury.

The Spanish government considered any publication dealing with the New World to be a state secret—Barbas work especially so, since it dealt with the mineral wealth. Consequently, to keep the secret better, the first edition of 1640 was printed in a very small edition. In addition, the penalty for the unauthorized sale of a copy of Barbas 1640 work was a certain and painful death by the Inquisition. However, this did not stop the Earl of Sandwich from smuggling a copy out of Spain, and publishing the first English edition in 1670. Probably since the English Crown did not want to provoke a diplomatic incident with Spain, this English edition was also published in a small number. It was not until the translation of Barbas work appeared in these collected editions, that it became available to a large readership.

[B]. **Gabriel Plattes**. *Plattes work, A Discovery of all Sorts of Mines from Gold to Coal* was originally published as a very rare separate book in London in 1639 under the title, *A Discovery of Subterranean Treasure, viz. Of all manner of Mines and Minerals, from Gold to the Coale*. However, it is far more common to find it bound within an edition of these collected works. It is an interesting treatise on mineralogy, and considered the first useful text in English on metallurgical matters. The short tract contains a wealth of factual information illustrated by the authors own experiments. The work also is interesting for its account of the gold and silver mines in New England, Virginia and the Bermudas, as well as other parts of America. Besides dealing in great detail with assaying, the author provides a recipe by which he claims to have produced pure gold, but at a cost greater than the value obtained. One chapter is devoted to all kinds of vegetable dyes, which Plattes preferred to mineral dyes.

[C]. **Thomas Houghton**. First published in 1681 under the title, *Rara Avis in Terris: or, the Com-pleat Miner*, this work was reprinted as an independent entity several times before it appeared in this collected edition. This book is important as the first published statement on English mining laws and customs as used by the lead miners in Derbyshire. Houghton claims of the second book, "the art of dialling and levelling grooves, a thing greatly desired by all miners, being a subject never before written by any." A dictionary clarifying mining terms is appended.

Reissue, 1739: *A collection of scarce and valuable Treatises upon Metals, Mines, and Minerals ... Part I. and II. Containing the Art of Metals, Written originally in Spanish. By ... Alvaro Alonso Barba, Director of Mines at Potasi, in the Spanish West-Indies. Translated by the Earl of Sandwich, in the year 1669. Part III. Containing that Invaluable Piece of Mr. G. Plattes, viz. A Discovery of all Sorts of Mines from Gold to Coal. Part IV. Houghton's Compleat Miner.* London, 1739. 8°: xii, 215, [4], [66] p., illust., one plate.

Gabriel Plattes. (BORN: 1600?; DIED: London, England, 1655?) *English scientist*. Practically nothing is known of Plattes. He is thought to be of Dutch extraction, and he was an author on agricultural subjects. His notable work on the subject is *A Discovery of Infinite Treasure* (London, 1639). He was an original thinker and thorough scientist, who insisted on practical experimentation to confirm hypothesis. Though described as the "original genius in husbandry," he was neglected in his lifetime. Despite his poverty, he refused to beg for money and eventually died of starvation. His body was found in the street.

Thomas Houghton. (BORN: ; DIED:) *English author*. An English writer on mining and legal matters.

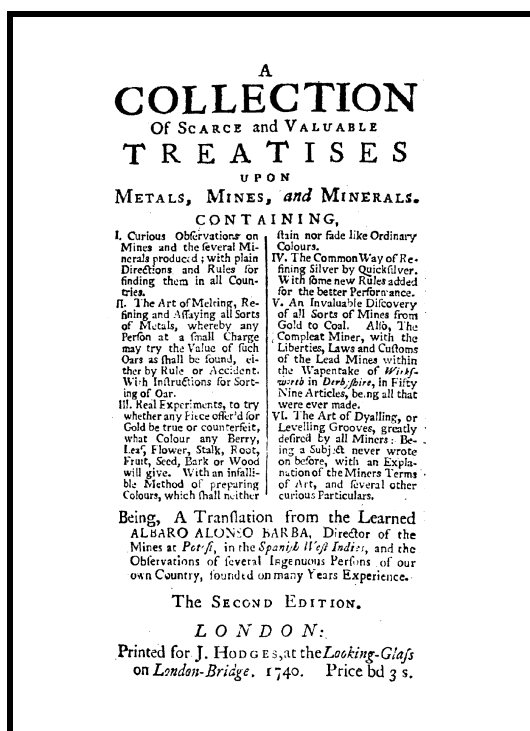
REFERENCES: (1738) Amorós, J.L., "Notas sobre la Historia de la Mineralogia y Cristalografia. IV. La Mineralogia española en la época del Barroco: Alonso Barba," *Boln. R. Soc. esp. Hist. nat. (Geologia)*, 61 (1963), no. 2, 167-86. • Debus, A.G., "Gabriel Plattes and his chemical theory of the formation of the earth's crust," *Ambix*, 9 (1961), no. 3, 162-5. • Hoover Collection: no. 225. • LKG: XVI 78. • NUC: 34, 432-4 [NB 0106718]. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • BL: [445.a.26]. • (Reissue, 1739) Roller & Goodman, *Catalogue*, 1976: 1, 77. (Plattes) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 881, 255-256. • DNB: 45, 410. • Watt, *Bibliotheca Britannica*, 1824. • WBI. (Houghton) BBA: I 575, 339. • Watt, *Bibliotheca Britannica*, 1824. • WBI.

288. — English, 1739.

A collection of scarce and valuable Treatises upon Metals, Mines, and Minerals ... Part I. and II. Containing the Art of Metals, Written originally in Spanish. By ... Alvaro Alonso Barba, Director of Mines at Potasi, in the Spanish West - Indies. Translated by the Earl of Sandwich, in the year 1669. Part III. Containing that Invaluable Piece of Mr. G. Plattes, viz. A Discovery of all Sorts of Mines from Gold to Coal. Part IV. Houghton's Compleat Miner. London, 1739.

8°: xii, 215, [5], [66] p., illus., one plate. VERY SCARCE.

REFERENCES: Hoover Collection: no. 226. • Kress Catalogue: S-3591. • NUC: 34, 432. • Palau, *Manual*, 1948-77: nos. 23632 & 23633. • Ward & Carozzi, *Geology Emerging*, 1984: no. 115.



COLLECTION OF SCARCE AND VALUABLE, 1740

289. — English, 1740.

A | Collection | Of Scarce and Valuable | Treatises | upon | Metals, Mines, and Minerals. | Containing | [Items I to VI set in two columns, separated by a vertical rule.] I. Curious Observations on | Mines and the several Mi- | nerals produced; with plain | Directions and Rules for | finding them in all Coun- | tries. | II. The Art of Melting, Re- | fining and Assaying all Sorts | of Metals, whereby any |

Person at a small Charge | may try the Value of
such | Oars [!] as shall be found, ei- | ther by Rule
or Accident. | With Instructions for Sort- | ing
of Oar. | III. Real Experiments, to try | whether
any Piece offer'd for | Gold be true or counterfeit,
| what Colour any Berry, | Leaf, Flower, Stalk,
Root, | Fruit, Seed, Bark or Wood | will give.
With an infalli= | ble Method of preparing |
Colours, which shall neither | stain nor fade like
Ordinary | Colours. | IV. The Common Way of
Re- | fining Silver by Quicksilver. | With some new
Rules added | for the better Preformance. | V. An
Invaluable Discovery | of all Sorts of Mines from |
Gold to Coal. | Also, The | Compleat Miner, with
the | Liberties, Laws and Customs | of the Lead
Mines within | the Wapentake of Wirks- | worth in
Derbyshire, in Fifty | Nine Articles, being all that
| were ever made. | VI. The Art of Dyalling, or |
Levelling Grooves, greatly | desired by all Miners:
Be- | ing a Subject never wrote | on before, with
an Expla- | nation of the Miners Terms | of Art,
and several other | curious Particulars. | Being,
A Translation from the Learned | Alvaro Alonso
Barba, Director of the | Mines at Potosi, in the
Spanish West Indies, and the | Observations of
several Ingenuous Persons of our | own Country,
founded on many Years Experience. | The Second
Edition. | London: | Printed for J. Hodges, at the
Looking-Glass | on London-Bridge. 1740. Price bd
3s.

[TITLE PAGE TO HOUGHTON'S TREATISE:]

Rara Avis in Terris: | Or The | Compleat Miner;
| In Two Books. | The First containing, | The
Liberties, Laws and Customs of | the Lead Mines,
within the | Wapentake of Wirkworth in Der- |
byshire; in fifty-nine Articles, be- | ing all that
ever was made. | The Second teacheth | The
Art of dialling and levelling Grooves; | a Thing
greatly desired by all Miners; | being a Subject
never written on before | by any. | With An |
Explanation of the Miners Terms of Art | used
in this Book. | Unius Labor, multorum Laborem
allevat. | By Thomas Houghton.

8°: A⁸ B-O¹² P⁴; 168ℓ.; [16], 1-319, [1] p.,
engraved frontispiece showing apparatus. PAGE SIZE:
164 x 94 mm.

CONTENTS: [2 pgs], Title page, verso "Books printed
for James Hodges ..."; [6 pgs], "To The | Reader."—
signed G.P. & "Advertisement Concerning | the present
Edition."—signed J. Hodges.; [8 pgs], "The | Contents.";
1-241, Text.; [242], Blank.; [243], Title page to Houghtons
Treatise.; [244], Blank.; 245-246, "To All | Miners | And |
Maintainers of Mines, | ..."—signed Thomas Houghton, 12
November 1680.; 247-312, Text of Houghtons work.; 313-
319, "An | Explanation | of the | Miners | Terms of Art

| Used in this | Book."; [1 pg], "Books printed for James
Hodges, ..." [=same advertisement as the verso of the title
page].

SCARCE. This work contains: Barba's *Art of
Metals* – Platte's *Discovery of Subterranean Treasure* –
Houghton's *Rara avis in Terris or the Compeat Miner*.
The engraved frontispiece shows apparatus used in the
distillation of mercury.

REFERENCES: BL: [957.e.43.]. • Ferguson, *Bibliotheca
Chemica*, 1906: 1, 70 & 207-8. • Hoover Collection: no. 227.
• Kress Catalogue: S-3592. • NUC: 34, 432-4. • Thorndike,
History of Magic, 1923-58: 7, 258-61. • Ward & Carozzi,
Geology Emerging, 1984: no. 116.

290. — English, 1923.

El Arte De Los Metales | (Metallurgy) | Translated
from the Spanish of | Alvaro Alonzo Barba | By
| Ross E. Douglass | And | E.P. Mathewson |
New York | John Wiley & Sons, Inc. | London:
Chapman & Hall, Limited | 1923.

8°: [i]-ix, [1], [1]-288 p., plates.

CONTENTS: [Plate: "Church of San Bernardo, Potosí
(Bolivia)...", verso facsimile reproduction of a Barba
title page (odd c1770 edition).; [i-ii], Title page, verso
"Copyright, 1923."; iii-v, "Preface."; [vi], Blank.; vii-ix,
"Table of Contents."; [1 pg], Blank.; [1]-276, Text of
translation.; [277]-288, "Index."

SCARCE. English translation by Ross E. Dou-
glass and E.P. Mathewson of the *El Arte De Los Metales*
(Madrid, 1729). "Our aim has been to reproducefaith-
fully the phraseology of the author." This is the first
and only translation of all five books of Barba's text.
The 1670 translation was only of the first two and is of
little value since the Earl of Sandwich lacked technical
knowledge.

REFERENCES: SinkCard.

German Editions

291. — German, 1676.

Alvaro Alonso Barba, | Eines Spanischen
Priesters und | hocherfahrenen Naturkündigers |
Berg=Büchlein/ | Darinnen | Von der Metallen
und Mi= | neralien Generalia und Ursprung/
wie | auch von derselben Natur und Eigenschafft/
| Mannigfaltigkeit/ Scheidung und Fein ma= |
chung/ imgleich allhand Edelmetallen/ | ihre
Generation etc. ausführlich und | nutzbarlich
gehandelt wird. | Anfangs in Spanischer Sprache
beschrie= | ben/ und in zwey Theile getheilet. |
Nun aber | Allen Bergwercks=Zugethanen und |
Bedienten/ ingleichen auch andern Ertz= und |
Natur=Kündigern/ und der Alchimie Beflisenen |
zu Dienst und Gefallen | In Teutsch übersetzt |
Von | I.L.M.C. | Mit Chru Sachsischer Freyheit
nicht | nach zudrucken. | [rule] | Hamburg/ | Auf
Gottfried Schultzens Kosten/ | 1676.

2 vols. in one. 8°: π² A-H⁸ χ¹ I-M⁸ N-O⁴: 107ℓ.;
[4], [1]-128, [2], 129-204, [4] p., one plate. Ornamental
initials.

RARE. Translated by Johann Lange from *The First Book of the Art of Mettals* (London, 1670).

REFERENCES: BL: [446.a.17.]. • Hoover Collection: no. 85. • NUC: 34, 432-4 [NB 0106734]. • Roller & Goodman, *Catalogue*, 1976: 1, 77. • VD17: 3:607213R.

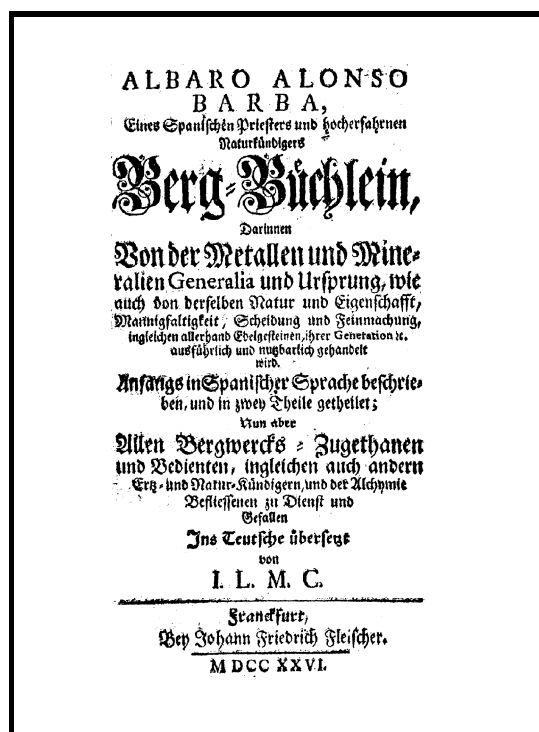
292. — German, 1696.

Berg-Büchlein: darinnen von der Metallen und Mineralien Generalia und Ursprung ... ausführlichen und nutzbarliche gehandelt wird; Anfangs in spanische Sprache beschrieben ... nun aber ... in Teutsch übersetzt von Albaro Alonso Barba ... Hamburg, Schultze, [1696].

2 parts in one volume. 8°: [4], [1]-128, [2], 129-204, [4] p., one plate.

VERY RARE. Reprint of the 1676 edition, apparently a very rare book.

REFERENCES: Darmstädter, *Berg-Büchlein*, 1926: p. 100.



BERG=BÜCHLEIN, 1726

293. — German, 1726.

Albaro Alonso | Barba, | Eines Spanischen Priesters und Hoherfahrnen | Naturkündigers | Berg=Büchlein, | Darinnen | Von der Metallen und Mine= | ralien Generalia und Ursprung, wie | auch von derselben Natur und Eigenschaft, | Mannigfaltigkeit, Scheidung und Feinmachung, | ingleichen allerhand Edelmetallen, ihrer Generation &c. | ausführlich und nutzbarlich

gehandelt | wird. | Anfangs in Spanischer Sprache bescrie= | ben, und in zwey Theile getheilet; | Nun aber | Allen Bergwercks = Zugethanen | und Bedienten, ingleichen auch andern | Ertz= und Natur=Kündigern, und der Alchymie | Befliessen zu Dienst und | Gefallen | Ins Teutsche übersetzt | von I. L. M. C. | [rule] | Franckfurt, | Bey Johann Friedrich Fleischer. | [rule] | M DCC XXVI.

2 parts in one volume. 8°: [4], 1-198 (i.e., 199), [3] p., text wood cuts. Sectional title page after page 128. PAGE SIZE: 168 x 102 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede."; 1-198 (i.e., 199), Text.; [3 pgs], "Register."

VERY SCARCE. Translation by Johann Lange, candidate for a degree in medicine ("I.L.M.C.") of *The First Book of the Art of Mettals* (London, 1670). In the preface, the translator encourages readers to expand their knowledge by learning something new about the New World.

REFERENCES: Darmstädter, *Berg-Büchlein*, 1926: 99. • Freilich Sale Catalog: no. 43. • Palau, *Manual*, 1948-77: no. 23635. • Sabin, *Dictionary*, 1868-1936: no. 3255b.

294. — German, 1739.

Albaro Alonso | Barba, | [...2 lines of titles and memberships...] | Berg-Büchlein, | Darinnen von der | Metallen und Minera= | lien Generation und Ursprung, wie | auch von derselben Natur und Eigenschaft, | Mannigfaltigkeit, Scheidung und Feinmachung, | ingleichen allerhand Edelmetallen, ihre Generation &c. | ausführlich und nutzbarlich gehandelt wird. | Anfangs in Spanischer Sprache bescrie= | ben, und in zwey Theile getheilet; | Nun aber | allen Bergwercks=Zugethanen | und Bedienten, ingleichen auch andern | Ertz= und Natur=Kündigern, und der Al= | chymie Befliessen zu Dienst und Gefallen | Ins Teutsch übersetzt | von | I.L.M.C. | [rule] | Franckfurt am Mayn | Bey Johan Friedrich Fleischer. | [rule] | MDCCXXXIX .

8°: [4], 198, [3] p., illus., frontispiece. Book two has a special title page. Five small woodcuts appear on page 196.

SCARCE. Translated by Johann Lange from *The First Book of the Art of Mettals* (London, 1670).

REFERENCES: BL: [954.a.19.]. • Hoover Collection: no. 85. • NUC: 34, 432-4 [NB 0106736].

295. — German, 1749.

Albaro Alonso | Barba, | Eines Spanischen Priesters, und Hoch= | erfahren Natur-Keaundigers | Docimasie | Oder | Probir= und | Schmeltz=Kunst, | Darinnen besonders | Von der Röst= Schmeltz= und | Scheide=Kunst/ wie auch denen hierzu | erforderlichen Oesen gehandelt wird. | Aus dem frantzösischen in das

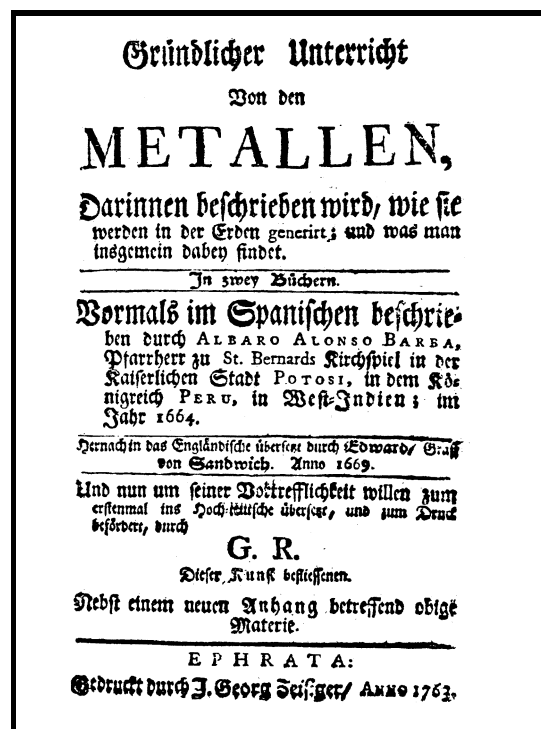
Teutsche übersetzt | Und mit einem Anhang/
| wie man die nothwendige Salia, das Ertz zu
| schmelzen/ und die Metallen zu scheiden/
| machen/ | und zurichten soll/ vermehrt; | Allen
Berg= Bau=Liebenden, | Ingleichen auch | andern
Ertz= und Natur=Kundigern | Zum besondern
Nutzen/ und Vergnügen | heraus gegeben | Von
| Matthia Godar. | Mit nothwendigen Kupfern
versehen. | [rule] | Wien/ bey Peter Conrad
Monath/ 1749. | [rule].

8°:)(8 A-K8; 88ℓ.; [16], 1-155, [5] p. PAGE SIZE:
170 x 105 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [8 pgs],
Dedication.; [6 pgs], "Vorrede."; 1-155, Text.; [4 pgs],
"Register."; [1 pg], Blank.

SCARCE. Translation from *Traité De L'Art
Métalique* (Paris, 1730). Matthias Godar's prefatory
text describes the extent of Barba's fame in European
scientific community. The title page mentions the
"noteworthy" copperplates, cut specifically for this new
German translation.

REFERENCES: BL: [990.b.6.]. • *Freilich Sale Catalog*: no.
44. • NUC: 34, 432-4 [NB 0106739]. • Palau, *Manual*, 1948-
77: no. 23636.



GRÜNDLICHER UNTERRICHT, 1763

296. — German, 1763 [American issue].

Gründlicher Unterricht | Von den | Metallen, |
Darinnen beschrieben wird, wie sie | werden in
der Erden generirt; und was man | insgemein

dabey findet. | [rule] | In zwey Büchlein. | [rule]
| Vormals im Spanischen beschrie= | ben durch
Alvaro Alonso Barba, | Pfarrherr zu St. Bernards
Kirchspiel in der | Kaiserlichen Stadt Potosi,
in dem Kö= | nigreich Peru, in West=Indien;
im | Jahr 1664. | [rule] | Hernach in das
Engländische übersetzt durch Edward / Graff |
von Sandwich. Anno 1669. | [rule] | Und nun
um seiner Vortreflichkeit willen zum | erstenmal
ins Hoch=Teutsche übersetzt, und zum Druck |
befördert, durch | G.R. | Dieser Kunst beflissen.
| Nebst einem neuen Anhang betreffend obige |
Materie. | Ephrata: | Gedruckt durch J. Georg
Zeisiger / Anno 1763.

8°: A-M8 N-P4; 108ℓ.; [1]-198, [4], 1-14 p. PAGE
SIZE: 188 x 116 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-[4],
"Vorrede."; 5-198, Text.; [4 pgs], "Allgemeines Register."; 1-14, "Zugab zum Anhang."

RARE. Translation from Barba's text contained
in *A Collection of Scarce and Valuable Treatises
upon Metals, Mines, and Minerals* (London, 1740).
This is the earliest work on mining and minerals
published at a colonial American press, and as such
has interest as the earliest known book on mining,
metallurgy and mineralogy published in the land that
would become The United States of America. In this
instance, the book was published at the famous press
of Ephrata, Pennsylvania, known as the Brudershaft,
which operated in 1763, and published only two works.
The text consists of two parts. The second, has its own
title page: "Das zweyte Buch, von den Metallen, darin
gelehrt wird der gemeine Weg, wie man das Silber durch
quecksilber reiniget: dazu etliche neue Regeln gefügt sid
darin gedachte Arbeit mehr erläutert wird."

REFERENCES: Bötte, G.J. and Tannhof, W., *The First
Century of German language printing in the United States
of America*. Göttingen, 1989. 2 vols: no. 267. • Evans,
American Bibliography: no. 9333. • *Freilich Sale Catalog*:
no. 45. • NUC: 34, 432-4 [NB 0106746]. • Rink, *Technical
Americana*, 1981: no. 769.

297. German transl., 1767: Alvaro Alonso | Barba, | [...2
lines of titles and memberships...] | Docimasie | oder |
Probir= | und | Schmelz=Kunst, | darinnen besonders |
von der Röst=Schmelz= und Scheide= | Kunst, wie auch
den hierzu erforderlichen | Oefen gehandelt wird. | Aus
dem Französichen in das Teutsche übersetzt; | und mit
einem Anhang, | wie man die nothwendige Salia, das Erz
zu schmelzen, | und die Metalle zu scheiden, machen | und
zurichten soll, vermehret. | Allen Berg= Bau= Liebenden,
| ingleichen auch | andern Erz= und Natur=Kundigern, |
zum besondern Nutzen, und Vergnügen | heraus gegeben
| von | Matthia Godar. | Mit nothwendigen Kupfern
versehen. | [double rule] | Zu finden bey Joh. Paul Krauß,
Buchhändler | in Wien. 1767.

2 vols. in one. 8°: [8], 165, [11] p., large engraved
folding frontispiece and 7 engraved folding plates. Woodcut
headpiece vignette on top of recto of second unnumbered
leaf; small woodcut vignette at end. RARE.

REFERENCES: BL: [973.b.6.]. • Roller & Goodman,
Catalogue, 1976: 1, 78.

French Editions

298. — French, 1730.

Traité | De L'Art | Métallique, | Extrait des Oeuvres d'Alvarez | Alfonse Barba, célèbre Artiste | dans les Mines du Potozi, | Auquel on a joint un Memoire concernant | les Mines de France; Avec un Tarif qui | démontre les Opérations qu'il faudroit faire | pour tirer de ces Mines l'Or & l'Argent | qu'en tiroient les Romains, lora qu'ils étoient | Maitres des Gaules. | Ouvrage enrichi de Figures en Taille douce. | [ornament] | A Paris, | Chez Guillaume Saugrain, au milieu | du Quay de Gèvres, à la Croix, blanche. | [rule] | M. DCC. XXX. | Avec Approbation & Privilège du Roy.

12°: 8⁸ 4 A-Z⁸ Aa-Bb⁸; 164^l.; [24], 1-264, [40] p., folding frontispiece (shows metallurgical process), 6 folding plates, tables (p. 88). The plates occur at pages, 92, 121, 136, 147 and 216. PAGE SIZE: 164 x 93 mm.

CONTENTS: [2 pgs], Half title page, "Traité | De L'Art | Métallique," verso "On ven chez ..."; [Folding frontispiece]; [2 pgs], Title page, verso blank; [12 pgs], "Preface."; [8 pgs], "Table | Des Chapitres."; 1-264, Text.; [37 pgs], "Table | Des Matieres."; [3 pgs], "Approbation."

SCARCE. Translated by Charles Hautin de Villars from *The First Book of the Art of Mettals* (London, 1670). Appended to this translation and presumably authored by the translator is a *Memoir* describing the gold and silver mines of France, together with several printed tables.

Another issue, 1733: Paris, Pierre Witte, Didot, 1733. 12°: [22], 264, [40] p., folding frontispiece, 7 folding plates, tables.

REFERENCES: (1730) Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 43. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 70. • NUC: 34, 432-4 [NB 0106758]. • Palau, *Manual*, 1948-77: no. 23638. • Roller & Goodman, *Catalogue*, 1976: 1, 78. • Sabin, *Dictionary*, 1868-1936: no. 3255. • BL: [954.b.41.]. • (Issue, 1733) NUC: 34, 432-4 [NB 0106759].

299. — French, 1733.

Traite de l'art metalique extrait des oeuvres d'Alvarez Alfonse Barba, celebre artiste dans les mines du Potozi, auquel on a joint un memoire concernant les mines de France; avec un tarif que demontre les operations qu'il faudroit faire pour tirer de ces mines l'or & l'argent qu'en tiroient les Romains, lors qu'ils étoient Maitres de Gaules. Paris, Pierre Witte, Didot, 1733.

12°: [22], 264, [40] p., folding frontispiece, 7 folding plates, tables.

VERY SCARCE. Translated by Charles Hautin de Villars from *The First Book of the Art of Mettals* (London, 1670).

REFERENCES: NUC: 34, 432-4.

300. — French, 1751.

Metallurgie, ou L'art de tirer et de purifier les métaux, traduite de l'Espagnol d'Alphonse Barba avec les dissertations les plus rares sur les mines & les opérations métalliques ... Paris, Chez Pierre-

Alexandre le Prieure, 1751.

2 vols. [VOL 1] 8°: xlv, 456, [16] p., one folding plate. [VOL 2] 8°: [10], 456, [20] p., one folding plate.

SCARCE. Translated by Nicole Lenglet du Fresnoy [see note below] from *Arte de los Metales* (2nd ed., Madrid, 1729), with the dedicatory epistle signed: Gosford (Lenglet Dufresnoy's pseudonym). Also included are translations and reprints of many treatises concerning mining, minerals and metallurgy. Several of the treatises were excerpted, according to their citations, from the *Philosophical Transactions* of the Royal Society, 1665-1678. Others, also with citations, first appeared in *Mémoires de l'Académie des Sciences*, 1701-1719 and in *Histoire de l'Académie*, 1727-1728.

TREATISES CONTAINED IN THESE VOLUMES ARE: Alvaro Alonso Barba, *Traité de Metallurgie and Liste des Mines du Perou*. — Bernardo de Vargas, *Extraits sur l'Art Métallique*. — Alonso Carrillo Laso de la Vega, *Description abrégée des Anciennes Mines d'Espagne*. — Sieur de Malus, *Avis des Riches Mines d'Or & d'Argent, & de toutes Especes de Metaux & Mineraux des Monts-Pyrénées*. — Martine de Bertereau, Baroness de Beau Soleil, *Veritable declaration ... des Riches & inestimables thresors, Nouvellement découverts dans le Royaume de France. La Restitution de Pluton*. — Guillaume Granger, *Paradoxe que les Metaux out vie*. — Charles de Bourgueville, Sieur de Bras, *Extrait des Recherches & Antiquités de la ville de Caen*. — Césaire d'Arcons, *Extrait du Livre sur le flux & reflux de la Mer and Extrait de la Relation d'un gentil-homme Anglois sur un Mineral semblable à de l'Or battu en feüilles, trouvé au Mexique*. — Edward Browne, *Relation ... touchant les mines de Hongri, Transylvanie & Autriche and Description des Mines de Mercure de Frioul and Description des Mines des Diamants présentée ... par le grand Maréchal d'Angleterre*. — Christopher Merret, *Relation des Mines d'étain de Cornouaille en Angleterre*. — Antoine de Jussieu, *Observations sur ce qui se Pratique aux Mines d'Almaden en Espagne, pour en tirer le Mercure*. — René Antoine Ferchault de Réaumur, *Essais de l'Histoire des Rivières & ruisseaux du Royaume qui coulent des Paillettes d'Or*. — Guillaume Homberg, *Remarques sur le raffinage de l'Argent. Observation sur une séparation de l'Or d'avec l'Argent par la Fonte*. — Charles François de Cisternay Du Fay, *Observation sur l'Or*. — Antoine Amand, *Méthode pour révivifier l'eau forte donnée à M. Du Fay and Opérations diverses pour la fonte et Purification des Metaux et Mineraux*. — Joseph Chambon, *Observations sur les Mines de Mercure, d'Or & d'Argent*.

Another issue, 1752: *Metallurgie ou l'art de tirer et de purifier les métaux. Traduite de l'Espagnol, avec les dissertations les plus rares sur les mines & les opérations métalliques par d'Alphonse Barba ...* La Haye, de Hondt, 1752. 2 vols. Reissue of the 1751 translation by Lenglet DuFresnoy.

Nicole Lenglet Du Fresnoy. (BORN: Beauvais, France, 5 October 1674; DIED: Paris, France, 15 or 16 January 1755) *French theologian & author*. Lenglet was a longtime secretary to the ruler of Köln, Clemens von Bavaria. After his retirement he lived in the Hague, Vienna and other cities before returning to his native France.

REFERENCES: (1751) Hoover Collection: no. 86. • NUC: 34, 432-4 [NB 0106750]. • Roller & Goodman, *Catalogue*, 1976: 1, 78. • BL: [990.b.7.8.]. • BL: [1578/2091.]. (Lenglet Du Fresnoy) ABF: I 644, 369-393. • Feller, *Biographie Universelle*, 1851. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 1421-2. • WBI.

BARELLI, Vincenzo. (BORN: Cuneo, Italy, 20 July 1781; DIED: Turin, Italy, 19 June 1843) *Italian naturalist*.

Barelli was an advisor on mining matters to the state of Turin.

REFERENCES: ABI: I 109, 224-229. • Poggendorff: 1, col. 100. • WBI.

301. — Italian, 1835.

Cenni | di | Statistica Mineralogica | Degli Stati Di Sardinia M. Il Re De Sardegna | Ovvero | Catalogo Ragionato | Della Raccolta | Formatasi Presso L'Azienda Generale Dell'Interno | per cura | Di Vincenzo Barelli | Capo Di Sezione Nell'Azienda Stessa | [ornament] | Torino 1835 | Dalla Tipografia Di Giuseppe Fodratti | conpermissione.

8°: [1]-686 p., tables (one folding).

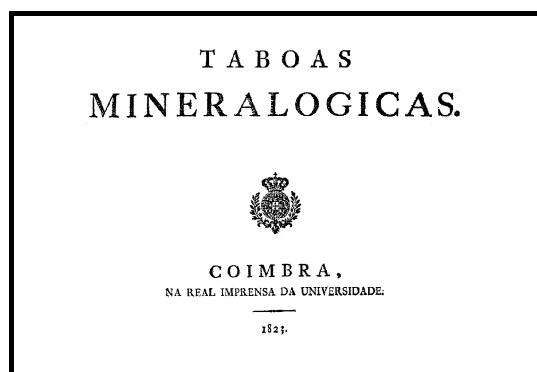
VERY SCARCE. Provides a detailed overview of the minerals of economical importance found in the kingdom of Sardinia. Included is a catalog of the mineral species found together with their locations.

REFERENCES: Ward & Carozzi, *Geology Emerging*, 1984: no. 1950.

BARJONA, Manuel José. (BORN: 1760; DIED: 1831) *Portuguese natural philosopher.*

1786, introduced a circulum of natural philosophy at the University of Coimbra. 1801, appointed to professorship of natural history, including Mineralogy, Geology and Zoology. He remained in post until 1828, when he retired.

REFERENCES: ABE: I 97, 370-374. • Pereira & Rodrigues, *Portugal Dicionario*, 1904. • Portugal Ferreira, M., "Dr. Manuel José Barjona (1758-1831), autor dos primeiros livros de Mineralogia editados em Portugal," *Memórias e Notícias*, no. 110 (1990), 77-102. • Portugal Ferreira, *Museu de História Natural*, 1990. • WBI.



TABOAS MINERALOGICAS, 1823

302. — Portuguese, 1823.

Taboas | Mineralogicas. | [ornament] | Coimbra, | Na Real Imprensa Da Universidade. | [ornate rule] | 1823.

Oblong 4°: π^2 1-34 [98 folding tables numbered I-XCVIII] 574; 18ℓ.; [4], [1]-24 p., 98 folding tables, [I]-VIII p. PAGE SIZE: 212 x 258 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Ao Leitor."—signed Manuel José Barjona.; [1 pg], "Tab. III. Columna Transparencia."; [1]-24, "Prolegomenos."; [98 folding tables]; [I]-VIII, "Index."

VERY RARE. In the preface the author explains his interest is to place before his readers a tabular method to explain the science of mineralogy. After a preliminary introduction, a series of ninety-eight tables are used to set out the names and properties of hundreds of mineral species arranged in a classification. An index at the end allows easy lookup of individual species.

Second edition, 1835: *Taboas Mineralogicas ... Segunda edição*. Coimbra, 1835. 4°: 256 p.

REFERENCES: BL: [7107.aaa.9.]. • Roller & Goodman, *Catalogue*, 1976: 1, 79.

BARRÈRE, Pierre. (BORN: Perpignan, France, 1690; DIED: 1755) *French physician & naturalist.*

Barrère was doctor of medicine and a professor at Perpignan, France.

REFERENCES: ABF: I 57, 291-296. • *Biographie Universelle*. • Feller, *Biographie Universelle*, 1851. • LKG: p. 279. • *Nouvelle Biographie Générale* (Hoefer). • Thomas, *Dictionary of Biography*, 1884: 291. • WBI.

303. — French, 1741 [First edition].

Essai | Sur | L'Histoire Naturelle | De La | France Equioxials, | Ou | De'Nombrement | Des Plantes, des Animaux, & des Miné- | raux, qui se trouvent dans l'Isle de Cayen- | ne, les Isles de Remire, sur les Côtes de | la Mer, & dans le Continent de la Guyane. | Avec | Leurs noms differens, Latins, François, & Indiens, | & quelques Observations sur leur usage dans | la Médecine & dans les Arts. | Par Pierre Barrere Corres- | [...7 lines of titles and memberships...] | [ornament] | A Paris, | Chez Piget, Quay des Augustins, 1 | l'Image S. Jacques. | [rule] | M. DCC. XLI.

8°: $\tilde{a}^8 \tilde{e}^4$ A-S⁸ 4T⁴; 120ℓ.; xxiv, 215 p. Page 215 numbered 315. PAGE SIZE: 188 x 106 mm.

CONTENTS: [i-ii], Half title page, "Essai | Sur | L'Histoire Naturelle | De La | France Equinoxiale," verso blank.; [iii-iv], Title page, verso blank.; [v]-vii, Dedication.; [viii]-xvii, "Avertissement."; xviii-xxiv, "Explication | Des noms abrégés des | Auteurs cités dans ce | Livre." (=bibliography).; [1]-315 (i.e., 215), Text.; [1 pg], Blank.; [7 pgs], Remarks about the book.; [1 pg], Blank.

RARE. Descriptions of the fauna, flora and minerals of French Guiana. The first part is devoted to plants, the second part to animals and minerals of which pp. 121-148 concern birds, pp. 149-168 quadrupeds and reptiles, pp. 169-182 fishes, pp. 183-189 shells, pp. 190-209 insects, pp. 210-215 minerals. Wood 221. "The species are grouped in genera arranged alphabetically. Since the book is pre-Linnean, none of the names are tenable, but the descriptions often form the basis for names afterwards applied by Linné. The work is rare." (Zimmer I, 40). Pierre Barrère (1690-1755) was a French naturalist from Perpignan. In 1722 he went to French Guiana where he stayed 3 years. After his return he became professor of botany in his home town.

REFERENCES: BMC: 1, 101 [wanting]. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 167. • Pritzell, *Thesaurus Literaturæ Botanicæ*, 1871-3: no. 425.

304. 2nd edition, 1749: Essai | Sur | L'Histoire Naturelle | De La | France Equioxials, | Ou, De'Nombrement | Des Plantes, des Animaux, & des Miné- | raux, qui se trouvent

dans l'Isle de Cayen- | ne, les Isles de Remire, sur les Côtes de | la Mer, & dans le Continent de la Guyane. | Avec | Leurs noms differens, Latins, François, & Indiens, | & quelques Observations sur leur usage dans | la Médecine & dans les Arts. | Par Pierre Barrere Corres- | [...7 lines of titles and memberships...] | [ornament] | A Paris, | Chez la Veuve Piget, Quay des Augus- | tins, à l'Image S. Jacques. | [double rule] | M. DCC. XLIX.

8^o: [i]-xxiv, [1]-315 (i.e., 215), [9] p. Page 215 numbered 315.

CONTENTS: [i-ii], Half title page, "Essai | Sur | L'Histoire Naturelle | De La | France Equinoxiale," verso blank.; [iii-iv], Title page, verso blank.; [v]-vii, Dedication.; [viii]-xvii, "Avertissement.;" xviii-xxiv, "Explication | Des noms abrégés des | Auteurs cités dans ce | Livre." (=bibliography).; [1]-315 (i.e., 215), Text.; [1 pg], Blank.; [7 pgs], Remarks about the book.; [1 pg], Blank.

VERY SCARCE. A reissue of the Paris, 1741 edition, differing only in the title page.

The mineralogy of French Guiana is treated on pages 210-215.

REFERENCES: BMC: 1, 101.

305. — French, 1743 [First edition].

Nouvelle | relation | de la | France Equinoxiale, | contenant | La Description des Côtes de la Guiane; de | l'Isle de Cayenne; le Commerce de cette | Colonie; les divers changemens arrivés | dans ce Pays; & les Murs & Coutumes | des différens Peuples Sauvages qui l'ha- | bitent. | Avec | Des Figures dessinées sur les lieux. | Par Pierre Barrere, Correspondant de | l'Académie Royale des Sciences de Paris, Docteur & | Professeur en Médecine dans l'Université de Perpi- | gnan, Médecin de l'Hôpital Militaire de la même | Ville, ci-devant Médecin-Botaniste du Roi dans l'Isle | de Cayenne. | [Orn.] | A Paris, | [Next three lines braced on the left-hand side by:] Chez { Piget, Quai des Augustins, à St. Jacques. | Chez | Damonneville, Quai des Augustins, à St. | Etienne. | Durand, rue St. Jacques, au Griffon. | M. DCC. XLIII.

12^o: π^4 A-V8/4 X7; 132 ℓ .; [4], [i]-iv, 1-250, [2] p., 17 engraved folding plates, 2 engraved folding maps. PAGE SIZE: 158 X 94 mm.

CONTENTS: [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [i]-iv, "Avertissement.;" 1-240, Text.; 241-250, "Table Des Matières.;" [1 pg], Privilege and colophon.; [1 pg], Blank.

VERY SCARCE. The author set off for Guiana at the end of the year 1721 and left in 1724. He explored the rivers Kourou and the Orapouss while studying flora and fauna and the customs of the inhabitants. The work also deals with sugar trade and with the Negro slaves and the various native tribes and includes details on the commerce and trade. This is the first important work on Guiana and formed the major source of the 18th century knowledge. It is distinct from the author's *Essai sur l'Histoire Naturelle de la France Equinoxiale* and is not another edition thereof. Although interesting in many subjects, this appears to have little of interest to mineralogy.

REFERENCES: BMC: 1, 101. • Mengel, *Catalogue of the*

Ellis Collection, 1972-83: no. 168. • Sabin, *Dictionary*, 1868-1936: no. 3604.

306. German transl., 1751: Neue Reisen nach Guiana, Peru und durch das südliche America, Worin die Merkwürdigkeiten dieser Länder nebst den Sitten und Gewohnheiten der Einwohner beschrieben werden, aus dem Französischen übersetzt. Göttingen, Vandenhoeck, 1751.

8^o: [12], 380, [12] p., 17 engraved plates, 3 engraved maps. Published as the second volume of the series: *Sammlung neuer und merkwürdiger Reisen zu Wasser und zu Lande*.

VERY SCARCE. A collection of translated travel works about South America and Guiana, containing: 1. Pierre Barrère, *Neue Beschreibung von Guiana*. 2. Pierre Bouguer, *Kurze Beschreibung einer Reise in das Innerste von Süd-America von den Küsten der Südsee bis nach Brasilien und Guiana ... nebst einer von ihm verfertigten neuen Karte von dem Amazonen-Flusse*. 3. C.M. de la Condamine, *Aus Bouguers kurzer Beschreibung der von einigen Mitgliedern der Kgl. Französischen Akademie der Wissenschaften nach Peru gethanen Reise*.

REFERENCES: BL. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 3605.

307. — French, 1746.

Observations | Sur | L'Origine | Et | La Formation | Des | Pierres Figurées, | Et sur celles qui, tant extérieurement qu'inté- | rieurement, ont une figure régulière & | déterminée. | Avec Figures. | Par Pierre Barrere, Correspondent de l'Academie | [...5 lines of titles and memberships...] | [ornament] | A Paris, rue Vieille-Bouclerie, | Chez [next 3 lines braced on the left with a "{"}] D'Houry pere, seul Imprimeur-Libraire de | Monseigneur le Duc d'Orleans. | Et Laurent D'Houry fils. | [double rule] | M. DCC. XLVI. | Avis Approbation & Privilege du Roy.

8^o: π^2 A¹ A* A²⁻⁸ B-D⁸ E³; 38 ℓ .; [6], 1-67, [3] p., 2 folding plates with figures labelled A-V. PAGE SIZE: 185 x 115 mm.

CONTENTS: [2 pgs], Half title page, "Observationes | sur | L'Origine | Et La Formation | Des Pierres Figurées | [...3 more lines...] | Avec Figures," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs]+1-67, Text.; [3 pgs], "Approbation.;" [At end], 2 folding plates.

RARE. Barrère made a special study of the origin and formation of figured stones (i.e., fossils) that he had discovered in the Pyrenées. This work contains his insightful observations. For example Barrère supposes that the reason fossil shells are found on the tops of the highest Alps and the rocks of the Pyrenées is because the land had formerly formed a basin in a great ancient sea. The two engraved plates show good depictions of figured stones and fossils.

REFERENCES: LKG: XVII 29. • NUC: 36, 500. • Roller & Goodman, *Catalogue*, 1976: 1, 81. • Ward & Carozzi, *Geology Emerging*, 1984: no. 122.

BARRINGER, Daniel Moreau. (BORN: 1860; DIED:) *American mining engineer, geologist & lawyer.*

REFERENCES: ABA: I 74, 340-349; II 31, 358. • *Herringshaw's National Library of American Biography*. • WBI. • *Who Was Who in America*: 1, ??.



BARRINGER

308. — English, 1897.

A Description | Of | Minerals Of Commercial Value. | A Practical Reference-book for the Miner, Prospector, and Business Man, or | any Person who may be interested in the Extraction or Treatment | of the Various Metallic or Non-metallic Minerals, and for | Students either in Field-work or in the Laboratory. | By | D.M. Barringer, A.M., LL.B., | One of the Authors of "The Law of Mines and Mining in the United States." | First Edition. | First Thousand. | New York: | John Wiley & Sons. | London: Chapman & Hall, Limited. | 1897.

Oblong 8°: [2], [1]-168 p. Tables printed in red and black. PAGE SIZE: 126 x 210 mm.

CONTENTS: [1 pg], Blank.; [1 pg], "By the same author ..."; [1-2], Title page, verso "Copyright, 1897, | ..."; 3-4, "Preface."—signed D.M. Barringer, June 1897.; 5-17, Text of part one.; [18], Blank.; [19], "Part II. | I.—Tables."; 20-155, Text of tables.; 156-157, "Classification Of Minerals | (After Brush)."; 158-161, "III.—Appendix."; [162], Blank.; 163-168, "IV.—Index To Tables."

SCARCE. This work was intended as a reference book for those practically interested in minerals, especially miners, prospectors, or students in the field. In addition to some preliminary matter of a general nature, it consists for the most part of a series of tables giving the prominent metals in alphabetical order, with the name of the important ores, and for each the prominent physical and chemical characters, arranged very clearly in tabular format.

REFERENCES: *American Journal of Science*: 4th Series, 5 (1898), 155. • NUC. • *USGS Library Catalog*.

BARRUEL, M.G. French chemist & mineralogist.

Barruel was a professor of chemistry and mineralogy.

309. — French, 1839.

Traité Élémentaire | de | Géologie, Minéralogie | et | Géognosie, | suivi d'une statistique minéralogique des départemens, | par ordre alphabétique. | et précédé d'une préface de M. Gasc. | [ornate rule] | Histoire naturelle Inorganique, | par | M.G. Barruel, | professeur de chimie et de minéralogie. | [ornate rule] | Paris. | Aimé André,

Libraire, | Éditeur des Ouvrages de Malte-Brun, rue Christine, n° 1. | [rule] | 1839.

[SERIES TITLE PAGE:]

Cours D'Études | Rationnelles | ou | Traités Méthodiques Et Progressifs | Des Sciences Naturelles, Physiques Et Morales, | De Littérature, D'Histoire Et Des Beaux-Arts, | Avec Leurs Applications | A L'Industrie, Aux Arts Et A L'Organisation Sociale | Des Peuples Au XIXe Siècle; | Sous La Direction De M. Gasc, | [...3 lines of titles and memberships...].

8°: $\pi^3 A^2 B^4 1-29^8 30^7$; 248 ℓ .; [6], [I]-XII, [1]-478 p., 6 plates (folding; Pl. 1-6 signed Gravé par Ambroise Tardieu, showing (1-4) crystal drawings, (5-6) geological cross sections and a cave), one table, p. 378.

CONTENTS: [2 pgs], Series title page, verso "Tous les volumes du Cours d'Études rationnelles sont revêtus de la | signature du Directeur."; [2 pgs], Title page, verso "Principaux Ouvrages De M. Gasc."; [1 pg], "Errata."; [1 pg], Blank.; [I]-XII, "Préface Du Directeur."—signed Gasc.; [1]-447, Text.; [448], Blank.; [449]-478, "Table | Par Ordre De Matières."; [At end], 6 folding plates.

VERY SCARCE. Published as one of Gasc's *Cours d'Études Rationnelles*, this derivative mineralogy provides a competent and reasonably comprehensive textbook of the science. The first part describes basic information on the science, such as definitions, an overview of the physical properties, chemical compositions, etc., while the bulk of the text is given over to a descriptions of individual mineral species. An alphabetical list of minerals known to occur throughout France occupies pages 379-447.

Reissue, 1843: *Cours Élémentaire de Géologie, Minéralogie et Géognosie, suivi d'une Statistique Minéralogique des Départements*. Paris, Aimé André, 1843. 8°: [3], [1], [i]-xii, [1]-480 p., 6 engraved plates. The same text as the 1839 edition with a new title page.

REFERENCES: BL: [1135.k.19]. • BMC: 1, 103.

BARSTOW, William. American physician.**310. — English, 1867.**

Sulphurets: | What They Are | How Concentrated, How Assayed, | And How Worked: | With A Chapter On The | Blow-Pipe Assay Of Minerals. | [rule] | By Wm. Barstow, M.D. | [rule] | San Francisco: | A. Roman And Company, | 11 Montgomery Street.

12°: [1]-120 p.

CONTENTS: [1-2], Title page, verso "Entered according to Act of Congress, in the year 1867, | ..."; [3]-4, "Preface."—dated 25 October 1867.; [5]-8, Table of contents.; [9]-114, Text.; [115-116], Blanks.; 117-118, "List Of Valuable Works On | Mining, Assaying, Etc., Etc."; 119-120, Advertisements.

VERY SCARCE. The object of this small work is to give the reader some idea of sulfur containing minerals and how they are assayed. It was written for mining personnel, mineralogists, prospectors, and others. The largest part of the text describes the assay process of

sulphurets. A section at the end is on the blow-pipe analysis of ores.

BARTHELSEN, Johann Gottfried.

Verzeichniß des von seel. Herrn Doct. Johann Philipp
Brayne nachgelassenen berühmten Naturalien Cabinets
welches in Danzig in der Langgasse für baares Danziger
Geld de 1765 ... (Danzig, 1765).

[illegible]

CASPER BARTHOLIN

BARTHOLIN (Berthelsen), Casper. (BORN: Malmö, Schonen, Denmark [now Sweden], 12 February 1585; DIED: Sorø, Denmark, 13 July 1629) *Danish physician.*

Bartholin was the father of both Thomas and Erasmus. He was educated at Universities of Copenhagen, Rostock and Wittenberg in Germany. After graduation he established a medical practice in Wittenburg. Bartholin was appointed a professor eloquence, than of medicine at the University of Copenhagen, 1613–24. He also accepted a post as rector of the University in 1618.

REFERENCES: DSB: 1, 479-83 [by W. Snorrason].
 • Poggendorff: 1, cols. 108-9. • Thomas, *Dictionary of Biography*, 1884: 296. • *World Who's Who in Science*: 119.

311. — Latin, 1628.

De Corporibus Perfecte Mixtis Inanimatis seu
Metallis, Lapidibus et Mineralibus Mediis. Hafniæ,
[1628].

80.

EXTREMELY RARE. No copy of this title has been traced. Possibly one of a series of 10 tracts in, *Systema Physicum* (Havniæ, Sartorius, 1628; 8°: xvi, 1312 p.).

REFERENCES: LKG: XII 1.

312. — Latin, 1628.

Caspari	Bartholini	Opuscu-	la Qvatouor
Singvlaria:	I. De Unicornu	ejusq;	affinibus
& succedaneis.	II. De Lapide Ne-	phritico,	

& Amuletis præcipuis. | III. De Pygmæis. | IV.
Consilium De | Studio Medico inchoando, con- |
tinuando & absolvendo. | Cum Gratia & Privilegio.
| [rule] | Hafniæ, | Excudebat Georgius Hantzschius
| Anno Epochæ Christianæ, 1628.

4 parts bound in one. 8^o: A-G⁸ 2A⁸ Bb-Cc⁸ Aaa-Eee⁸; ??ℓ.; [8], 48, [1], 29, [2 blank], 29 (i.e., 30), [1], 8, [1]ℓ. Each of the separate parts has its own title page.

RARE. The *De Lapide Nephritico* is recorded by LKG to also have been published in Amsterdam, 1678.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 50. • LKG: XVI359. • NUC: 37, 411. • Sinkankas, *Gemology Bibliography*, 1993: no. 422. • Wellcome Catalog (Books): 1, no. 691.

313. — Latin, 1704.

Caspari Bartholini Thom. F. De Glossopetris, Disputatio Physica, qvam Deo opt: max: favente in Hagia Universitate Hafniensi Public & tuebuntur lectisnimi & præstantissimi laureæ primæ philosophiæ candidati die XXIV. April ... Havniæ, Ex Typographeo Reg. Majest. & Universit., 1704.

4^o: [2], 10 p.

RARE. Describes fossilized shark's teeth.

REFERENCES: LKG: XVII 112. • NUC: 37, 412.



ERASMUS BARTHOLIN

BARTHOLIN, Erasmus. (BORN: Roeskilde, Denmark, 13 August 1625; DIED: Copenhagen, Denmark, 4 November 1698) *Danish physician & mathematician.*

Bartholin, the sixth son of CASPER BARTHOLIN, made between 1646 and 1656 a ten year tour of England, Holland, France and Italy. On his return to Copenhagen, he was appointed professor of mathematics and medicine at the city's University.

REFERENCES: Dansk Biografisk Haandleksikon: 1 95, portrait. • Dansk Biografisk Lexikon. • DSB: 1, 481-82 [by A. Rupert Hall]. • *Encyclopaedia Britannica*, 11th edition. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 75-88, portrait. • Poggendorff: 1, col. 109. • Sarjeant, *Geologists*, 1980: 2, 496. • SBA: Scandinavian Biographical Archive: A-374, 40-43 & A-16, 100-114. • Thomas, *Dictionary of*

Biography, 1884: 296. • WBI. • *World Who's Who in Science*: 119.

314. — Latin, 1661.

ErasmI Bartholini | D. & P.P. | De | Figura | Nivis | Dissertatio. | [rule] | Hafniæ, | Typis Matthiæ Godicchii, | Sumptibus P. Hauboldi | Anno cD LXXI.

8°: a-c8; 24ℓ.; [6], [1]-42 p., one plate.

CONTENTS: [2 pgs/=[a1](#)], Title page, verso blank; [4 pgs/=[a2r-a3v](#)], Dedication.; [Full page diagram showing how circles pack.]; [1]-42 (=a4r-c8v), Text.

VERY RARE. This is Bartholin's work treatise on the shape of ice crystals which speculates on the internal structure of snow crystals. This work has sometimes incorrectly been called the earliest treatise on crystallography, because it precedes Boyles work on gems by eleven years. However, Kepler's *Sterna Seu De Niue Sexangula* (Francofurti, 1611), which also discusses the shape of snow crystals, is much earlier still.

Included with Thomas Bartholin's 1661 work: Thomæ Bartholini | De | Nivis | Usu Medico | Observationes variæ. | Accessit | D. Erasmi Bartholini | De Figura Nivis | Dissertatio; | cum | Operum Authoris Catalogo. | [ornament] | [rule] | Hafniæ, | Typis Matthiæ Godicchii, | Sumptibus Petri Haubold, Bibl. | cD LXXI. 8°: [24], 232, [8]; [6], 42, [16] p. one engraved plate. Title page in red and black.

Rare. This is the first work after Avicenna to discuss refrigeration anesthesia. The Neapolitan surgeon Marco Aureliano Severino [1580-1656] reintroduced the use of snow and ice as an anesthetic agent in the seventeenth century, and his pupil Bartholin described Severino's methods in this work. Refrigeration anesthesia was employed successfully in amputations as late as the nineteenth century. Added to Bartholin's work is a treatise on the shape of ice crystals written by his younger brother Erasmus. Also included in this work is a bibliography of Thomas Bartholin's published works.

REFERENCES: Cushing: B-114. • Garrison & Morton: no. 5645.90. • *Heirs of Hippocrates*, 1990: 326. • Honeyman Sale: 1, no. 225. • NLM 17th Century Books (Krivatsy): no. 815. • NUC: ??, ??. • Osler, *Bibliotheca Osleriana*, 1969: nos. 1923, 1933, & 1956 [citing each section of the work separately.]. • Robinson, V., *Victory over Pain*. New York, Henry Schuman, 1946: pp. 40, 298-303. • Roller & Goodman, *Catalogue*, 1976: 1, 83. • Sallander, *Bibliotheca Walleriana*, 1955: no. 726. • Wellcome Catalog (Books): 2, 107.

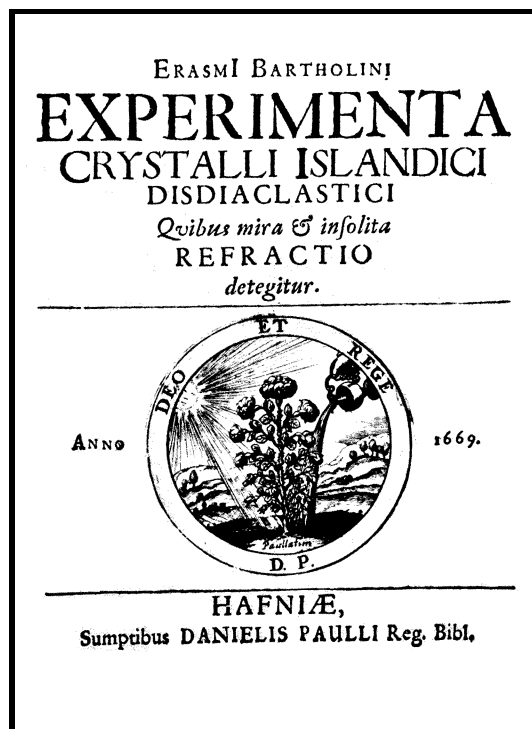
315. — Latin, 1669 [First edition].

ErasmI Bartholini | Experimenta | Crystalli Islandici | Disdiacastici | Qvibus mira & insolita | Refractio | detegitur. | [rule] | Anno [ornament] 1669. | [rule] | Hafniæ, | Sumptibus Danielis Paulli Reg. Bibl.

4°: (★)² A-G⁴ H² (C2 signed C3); 32ℓ.; [4], 1-60 p., circular engraved device on the title and numerous woodcut diagrams in the text. PAGE SIZE: 204 x 154 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication.; 1-60, Text.

VERY RARE. *Experimenta Crystalli Islandici* is the first published study in crystal optics, which also first described double refraction and contradicted the Newtonian theory of light which was presented at the



EXPERIMENTA CRYSTALLI ISLANDICI, 1669

same time. The work essentially describes a wide range of experiments performed on Iceland spar, a variety of the mineral calcite. Beginning with descriptions of the rhombohedral shape of the crystals, and noting that any pieces broken from a specimen are also rhombohedral, the author continues his experiments to define the physical characteristics of the specimens. Included among these are observations of its relative hardness, of its tendency toward cleavage, of its ease of decomposition when treated with acid, and of its ability to hold an electric charge when rubbed or heated. The remainder of the book describes Bartholin's discovery of double refraction, i.e. the physical property of Iceland spar (and other substances) to split light rays such that two images are seen when an object is viewed through the crystal. The author questions the character of double refraction, including its behavior when the crystal is turned, its angle of refraction and its existence in other substances. Bartholin then postulates a theory to explain the phenomena, which is based on pairs of pores, existing along cleavage planes inside the crystal, reflecting "corpuscula" of light at different angles.

Abridged English transl., 1671: Henry Oldenburg [see note below], secretary of the Royal Society of London, set about writing a translation of Bartholin's work. It was published as: "An Accompt of sundry Experiments made and communicated by the Learned Mathematician, Dr. Erasmus Bartholin, upon a crystal like Body sent to him out of Island" (see: *Philosophical Transactions of the Royal Society of London*, 6 (1671), no. 67, 2039-48).

German transl., 1922: Versuche mit dem Doppeltbrechenden Isländischen | Kristall, | die zur Entdeckung

BARTHOLOMAEUS ANGLICUS

einer wunderbaren | und außergewöhnlichen Brechung führten | von | Erasmus Bartholinus | Kopenhagen 1669 | [tapered rule] | Uebersetzt von | Karl Mieleitner | [rule] | Mit 17 Textfiguren | [rule] | 1922 | Akademische Verlagsgesellschaft M.B.H. | Leipzig | Okl. 205. 4°: [1]-35, [1] p.

CONTENTS: [1-2], Blank, verso series title page.; [3-4], Title page, verso blank.; [5]-6, "Vorwort.;" [7]-35, "Uebersetzung des lateinischen Textes.;" [1 pg], Blank.

Scarce. Translation by Karl Mieleitner [see note below] from *Erasmii Bartholini Experimenta Crystalli Islandici Disdiacastici* (Hafniae, 1669). Published as Ostwald's *Klassiker der exakten Wissenschaften*, no. 205. This German edition was reprinted in 1988.

English, 1991: *Experiments on birefringent Icelandic crystal. with a facsimile of the original publication 1669. Erasmus Bartholin.* Translated by Thomas Archibald. Introduction by Jed Z. Buchwald and Kurt Möller Pedersen ... Copenhagen. Danish National Library of Science and Medicine. 1991. Published as: *Acta Historica Scientiarum Naturalium et Medicinalium*, vol. 40. Includes bibliography.

Henry Oldenburg. (BORN: Bremen, Gernay, c1618; DIED: Charlton, near Greenwich, England, 5 September 1677) *English scientist.* Oldenburg graduated from the University of Utrecht in 1641, and he matriculated at Oxford from 1657 to 1658. He taught in the Paedagogium of Bremen. Later he became a professor in the newly established University of Dorpat, in what is now Estonia. Although it is known that Oldenburg matriculated in the University of Utrecht in 1641, nothing is known with assurance about what he did during the following twelve years, but there is presumptive evidence that he was a tutor during these years. In 1656 he became tutor to Boyle's nephew, Richard Jones, later the third Viscount Ranelagh and first Earl of Ranelagh. Oldenburg made a profession of scientific administration. He founded a system of records in the Royal Society that is still followed, created an international correspondence of scientists, and founded the first scientific journal, *The Philosophical Transactions of the Royal Society of London*. Oldenburg began publishing in 1665 the *Philosophical Transactions*, which were his personal enterprise, to make money, although he never made as much as he hoped. He also translated papers for the *London Gazette*. He also translated and published works from abroad. He translated at least two of Boyle's works into Latin, and he appears to have functioned effectively as the publisher for a number of Boyle's works.

Karl Mieleitner. (BORN: Munich, Bavaria, Germany, 31 March 1890; DIED: Munich, Bavaria, Germany, 15 March 1923) *German mineralogist & historian of mineralogy.* Born the son of a shoemaker, Mieleitner became in 1913 assistant for the Bavarian state mineral collection at the University of Munich, where in 1919 he succeeded F. Grünlung as 'Konservator.' He was an enthusiastic and energetic worker, producing several papers within a few years. He developed an interest in the history of mineralogy and published before his early death German translations, with authoritative notes, of the old works of Steno, Bartholin and Cappeller.

REFERENCES: BL: [529.d.6.(1.)]. • DSB: 1, 481-82 [by A. Rupert Hall]. • *Freilich Sale Catalog*: no. 33. • Garboe, Axel., "Nicolaus Steno (Niels Stensen) and Erasmus Bartholinus. Two 17th century Danish scientists and the foundation of exact geology and crystallography." *Danmarks Geologiske Undersøgelse, IV. Række*, 3 (1954), no. 9, [1]-48 p., illus. • Lima-de-Faria, *Historical Atlas of Crystallography*, 1990: 128. • LKG: XVI 311. • Norman Catalog: 1, 45, no. 124. • Norman Sale Catalog: 1, no. 275. • Roller & Goodman, *Catalogue*, 1976: 1, 83. • Schmitz, *Handbuch zur Geschichte der Optik*, 1981-90: 1, ??, • Ward & Carozzi, *Geology Emerging*, 1984: no. 126. (Oldenburg) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 831, 153-174. • *Biographie Universelle*. • DNB: 14, 988-90. • DSB: 10, 200-3 [by A. Rupert Hall]. • *Nouvelle*

Biographie Générale (Hoefer). • Poggendorff: 2, cols. 321-2. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: pp. 1279-80. (Mieleitner) *Mineralogical Magazine*: ?? (19??), 266 [by L.J. Spencer]. • Sarjeant, *Geologists*, 1980: 3, ??, • *Zeitschrift der Kristallographie*: 59 (1923), 86-8 [by H. Steinmetz].

316. 2nd edition, 1670: Erasmii Bartholini | Experimenta | Crystalli Islandici | Disdiacastici | Qvibus mira & insolita | Refractio | detegitur. | [rule] | Anno [ornament] 1670. | [rule] | Hafniæ, | Sumptibus Danielis Paulli Reg. Bibl.

4°: (★)² A-G⁴ H² (C2 signed C3); 32ℓ.; [4], 1-60 p., circular engraved device on title page, numerous woodcut diagrams in the text. PAGE SIZE: 204 x 154 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication.; 1-60, Text.

VERY RARE. A reissue with a new title page (note the "i" in Erasmii is lowercase and the year is 1670), but with the identical text of the 1669 issue.

REFERENCES: BL: [B.232.(5.)]. • Roller & Goodman, *Catalogue*, 1976: 1, 83. • Ward & Carozzi, *Geology Emerging*, 1984: no. 126 [reproduces the title page, p. 73].

BARTHOLOMAEUS ANGLICUS. (BORN: England, c1190; DIED: Magdeburg, Germany?, c1250) *English theologian & encyclopedia.*

An Englishman by birth he had been professor of theology at the University of Paris, when, in 1224 or 1225, he entered the newly established Order of St. Francis in company with his countryman and fellow-professor of theology, Haymo of Faversham, and two other professors of the same faculty. He continued his lectures at the claustral school until 1231, when he was sent to Magdeburg in Germany. There he took on the role as the new lector. Nothing definitive is known about the life of Bartholomæus after he left Paris in 1231. His life at Magdeburg was probably spent in teaching and reorganizing the Franciscan school there. The date of Bartholomæus' death is unknown, but it is thought that he died about the middle of the thirteenth century. He was formerly identified with a later Franciscan and Englishman, Bartholomæus of Glanvilla, or Glauvilla, who died about 1360, and to him the famous work *De Proprietatibus Rerum* was ascribed. Recent research places beyond doubt that the two men must be distinguished and that the authorship of the work in question must be attributed to the Magdeburg professor of 1231, and that the Glanville descriptor should be removed from his name.

REFERENCES: DNB: 7, 1288-90. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 385. • NDB: 1, ??, • Sarton, *Introduction*, 1928-52: 2, part 2, 568-8. • Se Boyar, G.E., "Bartholomæus Anglicus and his encyclopaedia," *The Journal of English and Germanic Philology*, 19 (1920), 168-89. • Thorndike, *History of Magic*, 1923-58: 2, 372-96. • *World Who's Who in Science*: 120. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 54.

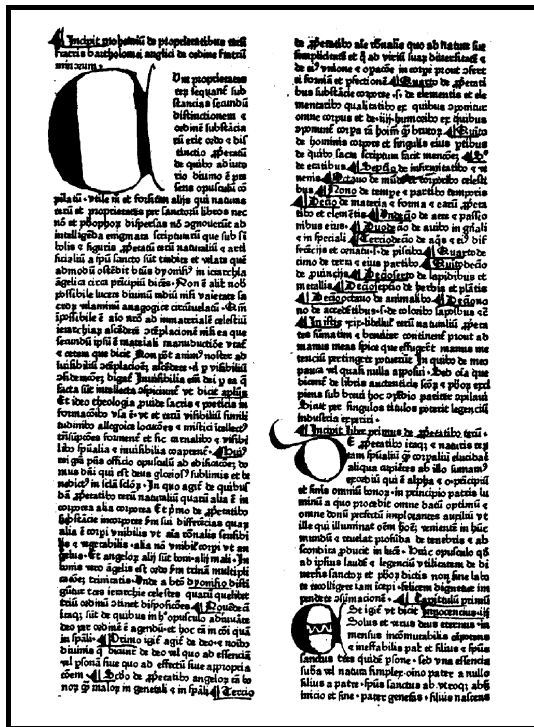
Latin editions

317. — Latin, 1472 [First edition].

De Proprietatibus Rerum ... [Cologne, Johann Veldener for William Caxton, 1472].

2°: [a-z¹⁰ A¹⁰ B⁸] (unsigned); 248ℓ.; no pagination, foliation or signatures. Two columns, Gothic type, 55 lines. PAGE SIZE: 400 x 290 mm. (very large copy).

CONTENTS: Folios, 1r, "Incipit prohemii de proprietatibus rerū | fratris bartholomei anglici de ordine fratrum | minorum. | [C10]Vm proprietates | reꝛ sequant sub | stancias ..."; 247v, col. 2, line 14: "Expliciunt tituli librorū | et



DE PROPRIETATIBUS RERUM, 1472

capitulum bertholomei | anglici de proprietatibus reru; 248, Blank.

EDITIO PRINCEPS. Extremely rare. While older authorities give precedence to the Basel edition, printed by Ruppel, it can now be stated that this is the first printed edition of Bartholomæus, since the early manuscript dates found in two Ruppel books have been shown to be forgeries, and as it now seems that Ruppel did not begin printing in Basel until after 1472.

Besides being the first printed edition, this Cologne issue is important for its connection to William Caxton [see note below]. The Cologne city ledgers record that Caxton arrived in the city in July 1471 (Birch) to learn the process and art of printing. In 1471, Johann Veldener [see note below] chose Bartholomæus' encyclopedia as his first project, and accepted Caxton as his pupil. However, indications are that Caxton's role was considerably more important as a financier. "The necessary capital is more likely to have come from Caxton than Veldener who had only recently achieved independence by the establishment of his own printing office and who therefore would have been close to the limits of his financial capacity. Under these circumstances, would he have dared on his own to venture the publication of so large a book? There is the further possibility that Veldener got together the necessary funds by charging the Englishman for instruction in the art of printing" (Corsten). Thus this edition is the earliest example of Caxton's printing.

De Proprietatibus Rerum was the most popular

encyclopedia of the thirteenth century, which has been called the age of encyclopaedias. The intellectual renaissance of the preceding century had stimulated a desire for learning. It was impossible for a large number of students to acquire first hand knowledge of every science and the universities could not accommodate all those who wished to learn. Therefore some means of spreading knowledge was required. The problem was solved by writing encyclopaedias that collected together the opinions of the best known authorities. These works varied in comprehensiveness and arrangement, but the educational aim was never forgotten. These books were to be used as textbooks and works of references for the preachers and scholars that did not have access to a library and who could not afford to collect one of their own. In fact, Bartholomæus wrote his compilation primarily for the student of theology and for the preacher as he explains in the Prohemium.

De Proprietatibus Rerum was written as an ordered encyclopedia of all the sciences of the time: theology, philosophy, medicine, astronomy, chronology, zoology, botany, geography, mineralogy, are the subjects treated in this work. It is the first important encyclopedia written in the Middle Ages and the first in which the works of Greek, Arabian, and Jewish naturalists and medical writers, which had recently been translated from Arabic into Latin, were included as contributions. Aristotle, Hippocrates, Theophrastus, the Jew Isaac Medicus, the Arabian Haly, and other researchers are frequently quoted. Even in the age before mechanical printing, the *De Proprietatibus Rerum* enjoyed widespread popularity as is shown by the many dozens of manuscripts still in existence. In manuscript form, it was translated into five European languages: French, English, Spanish, Provençal and Italian. Thus, it had a widespread appeal to the general population and had a great influence on the curriculum of the medieval university.

Bartholomæus based the structure of his book on the *Etymologiarum Libri Duo* written by the learned theologian, ISIDORE OF SEVILLE between 623 A.D. and 633 A.D. The 20 sections found in Isidore are reduced and rearranged to 19 by Bartholomæus; however, he follows his own method in compiling the observations and adheres to the accepted medieval form of quoting ancient authorities. Sprinkled throughout the text are his own observations that give the *De Proprietatibus Rerum* a unique flavor.

The 19 books of Bartholomæus' text are ordered thusly: (1) God, (2) Angels and Demons, (3) Of the Soul and Reason, (4) Of the Body's Essences, (5) The Human Body and Each of its Parts, (6) The Ages of Man (Family Life and Household Economy), (7) Of Infirmities and Medicines, (8) Of the World and the Heavenly Bodies (Cosmology and Astrology), (9) Of Time and the Divisions of Time, (10) The Material, Form, and Properties of the Elements, (11) Of the Air and its Natural Phenomena (Meteorology), (12) Of Winged Creatures, (13) Of Waters and Fish, (14) Of the Earth and its Features, (15) Of its Provinces (Political

BARTHOLOMAEUS ANGLICUS

and Economic Geography), (16) Mineralogy, including precious and semiprecious stones, sand, coal, Bezoar stones, etc., (17) On Plants and Trees (A Herbal), (18) Of Animals, and (19) On Non-Essential Characteristics (i.e., Colors, Tastes, Odors, etc.), and a Miscellany on Food, Drink, Eggs, Weights and Measures, Music, and Musical Instruments. This ordering which can be classified into four distinct sections suggests that Bartholomæus carefully planned his work.

The order of the *De Proprietatibus Rerum* is founded on a medieval logic of progression. The first three books form the first section with God, as the supreme creator and the prime moving force, with angles, demons and the soul all occupying the first position. Next comes the second part (books 4-7) devoted to the important factors that affect the life of man. The third section (books 8-18) treats the universe and may be subdivided into two parts. The first (books 8-13) has as its subject the world in general while the second (books 14-18) describes the earth in particular, including in book 16 metals, stones and minerals. The fourth section is composed solely of the nineteenth book in which everything not previously discussed finds a place including colors, odors, liquids, weighs, measures, music, etc. Since this work was intended as a reference to show man's place in God's universe, the text provides examples of good and bad conduct, and illustrates for him the principals of Christianity.

Since the greatest importance was assigned to theological matters, it became fairly simple for Bartholomæus to ignore the accuracy of his descriptions. Hence we find him with no clear idea of the locations of Egypt or India, the latter being a vague term which medieval men used to refer to the vast territory that stretched beyond Arabia. Bartholomæus' own eyes would have told him that bees do not carry small stones to weight them against the wind, and that crabs do not employ stones to keep oyster shells propped open while they dine on the contents. It was as obvious then as now that the legs of a fox are not shorter on the right side, and that swiftly moving currents are not the cause of oars becoming disjointed in appearance when dipped under water. Yet we cannot blame him for being a man of his time.

William Caxton. (BORN: Tenderton, Kent, England, c1416; DIED: London, England, 1491) *English printer, translator & linguist.* Caxton was the first to print books in English. He served an apprenticeship as a mercer and about 1441 he relocated to Bruges and established a successful business there. In 1462 Caxton was selected governor of the Merchants Adventurers in the Low Countries, serving as a diplomat for the English king. He learned the art of printing in Cologne between 1471-2, and at Brugge in 1475 he and Colard Mansion printed *The Recuyell of the Histories of Troye*, his own translation from the French, and the first book printed in English. In 1476 he returned to England, and established the first English print shop at Westminster in 1477. There he printed *Dictes or Sayengis of the Philosophes*, the first dated book printed in England. Caxton is known to have printed about 100 books, many dealing with themes of chivalry. He was the translator, from French, Latin, and Dutch, of about one third of the books that he printed, and for some he wrote original prologues, epilogues, and additions. His books are of

superb craftsmanship and are carefully edited. One of the typefaces used by Caxton is the original Old English type. Wynkyn de Worde, his successor as a printer, was his assistant at Westminster.

Johann Veldener. (BORN: ; DIED: c1487) *Dutch printer.* Native of the Diocese of Würzburg, Veldener set up his first press in the town of Louvain in 1473. In 1478, he moved to Utrecht and reestablished his print shop there.

REFERENCES: Anderson, *Illustrated History of the Herbals*, 1997: 59-65. • Arber, *Herbals, their Origin and Evolution*, 1986: 13. • Birch, J.G., "William Caxton's stay at Cologne," *The Library*, 4th series, 4 (1924), 48-52. • BMC XV: 1, 234-5 [IC 3771]. • Collison, *Encyclopaedias*, 1966: 57-9. • Corsten, "Caxton in Cologne," *Journal of the Printing Historical Society*, no. 11 (1976/77), 1-18. • Duff, *Fifteenth Century English Books*, 1917: no. 39. • Goff: no. B-131. • GW: no. 3403. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2498*. • Keen, E.J., "Bartholomæus Anglicus, *De Proprietatibus Rerum*," *Australian National University Department of History*, 1978 [Dissertation]. • Klebs, *Incunabula Scientifica*, 1938: no. 149.2 [1472?]. • NUC: [no copy listed]. • Oates, *Cambridge 15th Century Books*, 1954: no. 590. • Osler, *Incunabula Medica*, 1923: no. 12. • Painter, G.D., *William Caxton*, 1977: [see pages 51-8]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1865. • Pforzheimer: no. 44. • Polain, *Catalogue*, 1932: no. 497. • Proctor, *Index*, 1898-1906: no. 1105. • Quarg, G., "Zum Frühdruck von Bartholomæus Anglicus 'De proprietatibus rerum' (GW 3403). Überlegungen anhand des Kölner Exemplars," *Gutenberg-Jahrbuch 1998 / Gutenberg-Gesellschaft. Begr. von Aloys Ruppel / Im Auftr. der Gutenberg-Gesellschaft hrsg. von Stephan Füssel*, Mainz, 1998. • Rohde, *Old English Herbals*, 1922: 44-55. • Twomey, M.W., "Western Medieval Encyclopedias in England Before 1500: A Preliminary List," *Muenstersche Mittelalter-Schriften*. [Forthcoming]. • Voigt, *Bartholomæus Anglicus*, 1910: no. 1. • Voullième (Berlin): no. 829. • Voullième (Köln): no. 218. (Caxton) ADB. • Blake, N.F., *Caxton : England's first publisher*, London, Osprey Publishing, 1976. • Blake, N. F., *William Caxton and English literary culture*, London ; Rio Grande, Ohio : Hambledon Press, 1991. • Deacon, R., *A Biography of William Caxton : the first English editor, printer, merchant, and translator*, London, Muller, 1976. • DNB: 3, 1290-8. • *Encyclopaedia Britannica*, 11th edition. • *Nouvelle Biographie Générale* (Hofer). (Veldener) ADB: 39, 571-2. • *Biografisch Woordenboek België*. • *Biografisch Woordenboek Nederland*. • BMC XV: ??, ?? • Geldner, *Die deutschen Inkunabeldrucker*, 1968-70: 2, 319, 323-5 & 338-40. • *Lexikon des Buchwesens*: 2, ??.

318. 2nd edition, 1472/3: *De Proprietatibus Rerum* ... [Basel, Berthold Ruppel, 1472 or later].

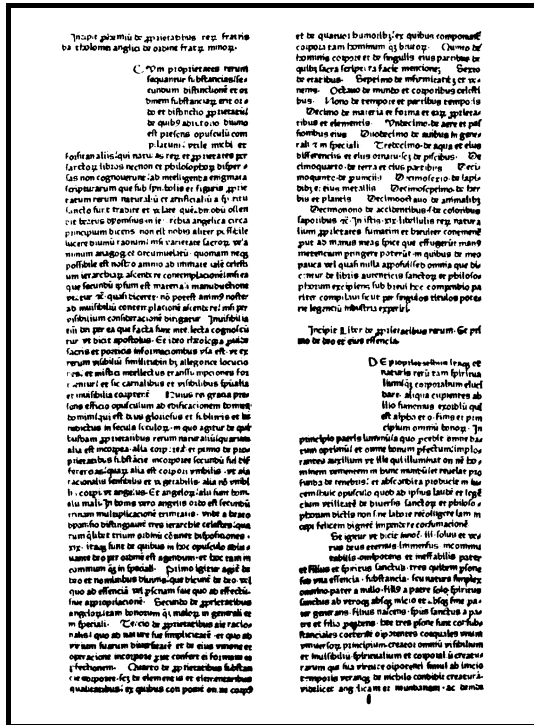
2^o: [a¹² b-g¹⁰ h⁶ i¹⁰ k-l⁸ m-q¹⁰ r¹² s-y¹⁰ z⁴] (unsigned); 220ℓ.; no pagination, foliation or signature marks. Two columns, Gothic type, 61 lines. PAGE SIZE: 406 x 288 mm.

CONTENTS: Folios, 2r, "Incipit phemiū de p̄rietatibus reꝝ fratris | bartholomei anglici de ordine fratꝝ minoꝝ. | [C8]Vm proprietates rerum | sequantur substancias. ..." 218r, col. 1, "[T8]Abula huius insigni operis (quod de re | rū proprietatibus intitulat) incipit feli | citer ..."; 220r, col. 1, end: "zeugia xxiii."; 220v, Blank.

VERY RARE. Printed by Berthold Ruppel [see note below]. Some incunabula bibliographies believed this to be the first edition, however, recent studies have shown that it is instead a second edition [see the commentary on the previous entry].

Berthold Ruppel. (BORN: Hanau, Germany, ; DIED: 1494/5) *German printer.* Ruppel was the first printer in Basel. He published numerous works between 1460 and his death.

REFERENCES: BMC XV: 3, 716 [IC 37019]. • Goff: no. B-130. • GW: no. 3402 [about 1470]. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2499*. • Hoover Collection:



DE PROPRIETATIBUS RERUM, 1472/3

no. 92. • Klebs, *Incunabula Scientifica*, 1938: no. 149.1. • NUC: 37, 427-30 [NB 0157710]. • Oates, *Cambridge 15th Century Books*, 1954: no. 2737. • Osler, *Incunabula Medica*, 1923: no. 191. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1866. • Proctor, *Index*, 1898-1906: no. 7452. • Stillwell, *Awakening Interest in Science*, 1970: 595. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 2. (Ruppel) ADB: 29, 705-7. • DBA: I 1068, 47. • *Lexikon des Buchwesens*. • NDB: 22, 280-1. • WBI. • Webb, C.A. and Victor Scholderer, "Berthold Ruppel, Printer of the Sermones Meffreth," *The Library*, s5-XV (1960), no. 1, 1-7.

319. 3rd edition, 1480: Incipit prohemium de proprietatibus rerum fratris Bartholomei anglici de: ordine fratrum minorum. Explicit tractatus de proprietatibus rerum editus a a fratre Bartholomeo an glico ordinis fratu minorum. Impres sus per Nicolauz pistoris de Bens sheyn et Marcum reinhardi de Argentina so cios. Sub anno dni millesimo quadrin getesimo octogesimo. di vero Juli xxix. [Lyons:] Nicolaus Philippi and Marcus Reinhart, 29 July 1480.

2°: a-10 k-l8 L8 m-x10 y-z8 [et]8 [con]8 A-F10 G-H8; 322ℓ.; no pagination. Two columns, Gothic type, 49 lines. PAGE SIZE: 290 x 305 mm.

CONTENTS: Folios 1, Blank.; 2r, col. 1 (signed a2), "Incipit prohemium de proprietatib⁹ | rerum fratris Bartholomei anglici de | ordine fratrum minoꝝ. | [C14]Vm proprietatib⁹ | ter rerum sequa | tur substantias ...";

RARE. Printed by Nicolaus Philippi and Marcus Reinhart.

Handpainted initial letter. Pages not numbered. "De arboribus et plantis," xvii HC. 2500*, G.W. 3404; Pr. 8530.

Fol. [1a], (c. sign. a 2) title-page: Incipit prohemium de proprietatibus rerum fratris Bartholomei anglici de ordine fratrum minoꝝ. Fol.[320] verso: Explicit tractatus de pprietatibus rerum editus a fratre Bartholomeo an glico ordinis fratu minorum. Impres sus per Nicolauz pistoris de Besssheym et Marcum reinhardi de Argentina so cios.

Sub anno dni millesimo quadrin getesimo octogesimo, die vero Iulij. xxix.—See hain, no. 2500. "De arboribus et plantis," liber xvii.

REFERENCES: BMC XV: 8, 245 [IB 41584]. • Goff: B-132. • GW: no. 3404. • Hain, *Repertorium Bibliographicum*, 1826-38: no. HC 2500. • IGI: no. 1252. • Klebs, *Incunabula Scientifica*, 1938: no. 149.3. • NUC: 37, 427-30 [NB 0157711]. • Oates, *Cambridge 15th Century Books*, 1954: no. 3184. • Osler, *Incunabula Medica*, 1923: no. 211. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1867. • Polain, *Catalogue*, 1932: no. 498. • Proctor, *Index*, 1898-1906: no. 8530. • Roller & Goodman, *Catalogue*, 1976: 1, 84. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 3. • Voulliéme (Berlin): no. 4675.

320. 1481: De Proprietatibus Rerum ... Cologne, Johann Koelhoff, the Elder, 1481.

2°: [a]10 b-e8 f10 g-n8 o6 p-z8 A-O8 P10 Q-Z8 aa8 bb8 cc6 dd6 ee-kk8] (unsigned); 458 leaves (first and last blank.); no pagination, foliation or signatures. Two columns, 39-40 lines, capital spaces, catchwords, one table. PAGE SIZE: 280 x 300 mm. RARE.

CONTENTS: Folios, 1, Blank.; 2r, col. 1: "Incipiūt tituli libro | rū et capitulū venerabil' | Bartholomei anglici de propieta | tibus reꝝ. | ..."; 12r, "Incipit phemiū de proprietatib⁹ reꝝ fratris | Bartholomei anglici de ordiue fratꝝ minoꝝ | [C9]Vm proprietates reꝝ sequant | substantias ..."; 457v, line 24, colophon: "Explicit tractatus de proprietatibus reꝝ edit⁹ | a frē bartolomeo aꝑlico ordiis fratꝝ minoꝝ. | Impressus per me Johanem koelhoff de | lubeck Colonie ciuem. Anno natuiuitatis | domini .Mccccxxxi."; 458, Blank.

REFERENCES: BMC XV: 1, 223-4 [IB 3534]. • Goff: no. B-133. • GW: 3405. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2051. • Klebs, *Incunabula Scientifica*, 1938: no. 149.4. • NUC: 37, 427-30 [NB 057712]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1868. • Polain, *Catalogue*, 1932: no. 499. • Proctor, *Index*, 1898-1906: no. 1048. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 4. • Voulliéme (Berlin): no. 771. • Voulliéme (Köln): no. 219.

321. 1482: De Proprietatibus Rerum ... [Lyons:] Petrus Ungarus (Pierre Hongre), 21 November 1482.

2°: a-d10 e8 f-h10 ik12 l-n10 op10 q-t10 u12 x12 A-E10 F12; 256ℓ.; no pagination. Two columns, 53-54 lines, capital spaces. PAGE SIZE: 282 x 209 mm.

CONTENTS: Folios, 1, Blank.; 2r, col. 1 (signed .a.), "Incipit prohemium de proprietatibus re | rum fratris Bartholomei anglici o' ordine fra | trum minorum. | [C13]Vm proprietates re | rum sequatur substā | tias ..."; 255r, col. 1, line 17: "... ⁊ breuiter recitatur. vt | patere potest diligentius intuenti. | Explici tractatus de prietatibus rerum | editus a fratre bartholomeo anglico ordinis | fratrum minorum. Impressus per Petrum | vnꝝaꝝ. Sub anno domini .Millesimoꝝa | dringentesimo octuagesimosecundo. die vero | nouembris .xxi. | finis | Laus deo."; 255v, Blank.; 256, Blank.

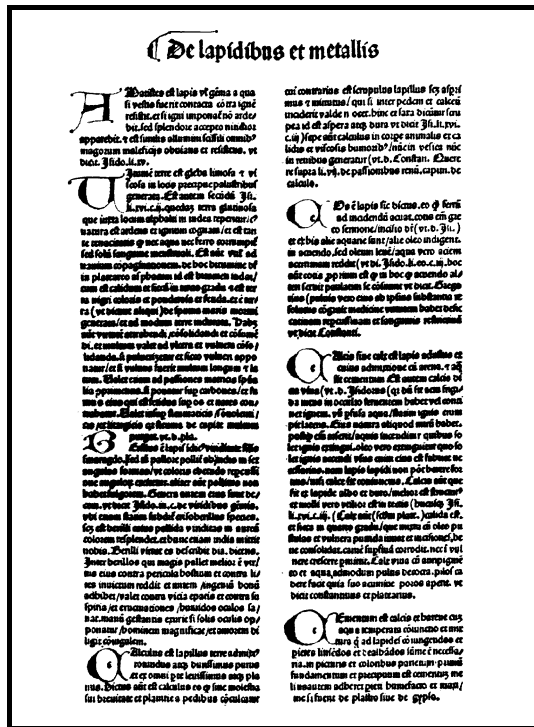
RARE. Reprinted from the edition of Philippi and Reinhart, 1480, as is shown by the wording of the colophon.

REFERENCES: BMC XV: 8, 268 [IB 41744]. • Goff: no. B-134. • GW: no. 3406. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2502. • IGI: no. 1253. • Klebs, *Incunabula Scientifica*, 1938: no. 149.5. • Oates, *Cambridge 15th Century Books*, 1954: no. 3197. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1869. • Polain, *Catalogue*, 1932: no. 500. • Proctor, *Index*, 1898-1906: no. 8573. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 5.

322. 1482: De Proprietatibus Rerum ... [Lyons, Nicolaus Philippi and Marcus Reinhart], 10 December 1482.

2°: (j-3)8 a-l8 m10 n10 o-q8 A-E8 F6 G-l8 K10 L-O8 P12 Q10 R12; 286ℓ.; no pagination. Two columns, 53-56 lines. PAGE SIZE: 284 x 198 mm. RARE.

CONTENTS: Folios, 1, Blank.; 2r, col. 1 (signed j): "Tabula rubricarū que et librorum ⁊ ca | pitulorum materiam sigillarū demonstrat. | ..."; 258r, col. 2, line 18: "⁊ breuiter recitantur. vt patere pōt diligē | tuis



DE PROPRIETATIBUS RERUM, 1482 (LYONS)

intuenti. | Explicit tractatus de proprietatibus rerū | editus a fratre Bartholomeo anglico or= | dinis fratrum minorum. Impressus sub | anno domini Millesimoquadringentesi= | mo octuagesimo secundo. die vero decem= | brii. x. | finis. | Laus deo. | 285v, Blank; 286r, "Registrum" | a | folium album" in 4 columns.; 286v, Blank.

REFERENCES: BMC XV: 8, 246 [IB 41590]. • Goff: no. B-135. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2503. • IGI: no. 1254. • Klebs, *Incunabula Scientifica*, 1938: no. 149.6. • NUC: 37, 427-30 [NB 0157713]. • Oates, *Cambridge 15th Century Books*, 1954: no. 3185. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1870. • Polain, *Catalogue*, 1932: no. 501. • Proctor, *Index*, 1898-1906: no. 8531A. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 6.

323. 1483: De Proprietatibus Rerum ... Cologne, Johann Koelhoff the Elder, 19 January 1483.

2°: [*]10 a¹⁰ b-d⁸ e¹⁰ f-x⁸ y¹⁰ z⁸ A-R⁸ S¹⁰ T-Y⁸ Aa-Dd⁸ Ee⁶ Ff⁶ Gg-Ll⁸ Mm¹⁰ (a1 & Mm10 blank); 472ℓ.; no pagination or foliation. Two columns, 38 to 40 lines, capital spaces with guide letters. The headlines sometimes give only the numbers of the books, sometimes also their subjects. RARE.

CONTENTS: Signs., 1r, Blank; 1v, col. 1: "incipiunt tituli libroꝝ | 2 capituluꝝ venerabilis bartholo | mei anglici de proprietatibus rerum."; 9v, line 3, "Expliciunt tituli librorum et ca | pituloru Bartholomei anglici de | proprietatibus rerum."; 10r, "Auctores de quoz scri= | ptis sūt hec tracta st' isti."; 10v, line 33: "Istoꝝ et multorum alioꝝ in istis li | bellis verba in diuersis locis sūma | tim et breuiter recitant' vt patere | potest diligenter intuenti." 12r, col. 1 (signed a2): "Prohemiu in opus de | proprietatib⁹ rez Reli | giosi patris fris Bar= | tholomei anglici de or | dine fratru minorum. | [C6]Vm prietates re | rum sequantur sub | stantias/ ..."; 471v, col. 2, line 11, colophon: "Explicit tracta tus de prietati⁹ | rerum editus a fratre Bartholo- | meo anglico ordi fratꝝ minoꝝ | Impressus et completus per me | Iohannē koelhoff de

Lubeck Co | lonie ciuē. Anno gře .Mcccclxxxiiij. | in vigilia Sebastiani martyris."

REFERENCES: Hoover Collection: no. 93. • NUC: 37, 427-30 [NB 0157716]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 7.



DE PROPRIETATIBUS RERUM, 1483 (LEAF 2/1R)

324. 1483: De Proprietatibus Rerum ... Nuremberg, Anton Koberger, 30 May 1483.

2°: [16 2-3⁸ 4-6⁶ 7-39⁸/6/6 40⁸] (unsigned); 1/1 and 40/8 blank; 268ℓ.; no pagination, foliation or signitures. Two column, type 84G (text) and 165G (headings and headline), one capital space (17 lines) in the prologue, 2-5 line capital spaces throughout and paragraph marks in red to 19/1, thereafter left blank. PAGE SIZE: 290 x 195 mm. RARE.

CONTENTS: 1/1 (=1), Blank; 1/2r (=2r), Tabula.; 1/6v (=6v), List of authors cited.; 2/1r (=7r), Prologue.; 2/1v (=7v), Text.; 40/7v (=267v), Colophon.; 40/8 (=268), Blank.

REFERENCES: BMC XV: 2, 425 [IB 7306]. • BSB-Ink: B-95. • Goff: B-137. • GW: 3409. • Hain, *Repertorium Bibliographicum*, 1826-38: *2505. • IGI: no. 1255. • Klebs, *Incunabula Scientifica*, 1938: no. 149.8. • NUC: 37, 427-30 [NB 0157717]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1872. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 8.

325. 1485: De Proprietatibus Rerum ... Strassburg, [Printer of the 1483 Jordanus de Quedlingurg (Georg Husner)], 14 February 1485.

2°: π⁶ a-b⁸ c-y⁶/8 z⁸ A-F⁶/8 G-I⁶ K-T⁶/8 (T8 blank).; 300ℓ. Text in double columns, 47 lines per column. Initial spaces with guide-letters.

RARE. Imprint from Goff. Colophon (leaf T7v): Impressus Argentine Anno d[omi]ni .Mccc.lxxxv. Finitus in die sancti Valentini.

Husner, Georg, d. 1505, printer.

REFERENCES: BMC XV: 1, p. 132. • GW: 3410. • Hain, *Repertorium Bibliographicum*, 1826-38: 2506*. • NUC: NB 0157719. • Pellechet, *Catalogue General des Incunables*, 1970: 1873. • Proctor, *Index*, 1898-1906: 592. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 9. • Wellcome Catalog (Books): 1, no. 692.

326. 12 June, 1488: Proprietates Rerum domini bartholomei anglici. [1488]

2°: π^6 a⁸ b-p⁶ q⁸ r-t⁶ v⁸ x-y⁶ A⁸ B-C⁶ D⁸ E⁶ F⁸ G-H⁶ I⁸ K-L⁶ M⁸ N-P⁶ Q⁸ R-S⁶ T⁸ U-X⁶ Y⁸ Z⁶ AA⁶ BB⁸ CC⁶ DD⁸; 326ℓ.; no pagination or foliation. Text in double columns, 50 lines per column. Initial spaces, some with guide-letters. Printed on sheets of "chancery"-size paper.

RARE. Place of publication and printer from GW, date from colophon. Colophon (leaf DD8r): Explicit liber de p[ro]prietatibus rerum editus a fratre Bartholomeo anglico ordinis fratrum minorum. Anno domini Mccccxxvij. kale[n]das vero Iunij xij.

Knoblochster, Heinrich, printer.

REFERENCES: NUC.

327. 21 May, 1488: De Proprietatibus Rerum ... [Heidelberg, Printer of Lindelbach (Heinrich Knoblochster?)], 21 May 1488.

2°: 326ℓ. RARE.

REFERENCES: GW: 3411. • Hain, *Repertorium Bibliographicum*, 1826-38: 2508 [=HC 2507]. • Klebs, *Incunabula Scientifica*, 1938: 149.10. • NUC: 37, 427-30 [NB 0157720]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 10.

328. 1491: De Proprietatibus Rerum ... Strassburg, [Printer of the 1483 Jordanus de Quedlinburg (Georg Husner)], 11 August 1491.

2°: π^6 a-b⁸ c-d⁶ e⁸ f-g⁶ h⁸ i-k⁶ l⁸ m-n⁶ o⁸ p-z⁶ A-R⁶; 259ℓ.; 516 p. COLOPHON: Impressus Argentine Anno domini .M.cccc.xc. Finitus altera die post festum sancti Laurentij martyris [11 August]. PAGE SIZE: 260 x 190 mm.

RARE. Husner, Georg, d. 1505, printer.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 84. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 11.

329. 1492: Bartholomeus anglicus de Proprietatib[us] rerum. [Nuremberg, Anton Koberger, 20 June 1492]

2°: π^4 a-z⁶ A-G⁶ H-I⁸ (I⁸ blank); 200ℓ. (leaf [200] blank). Text in double columns, 61 lines per column. Initial spaces, with guide-letters; 18-line space left for opening initial on alr. Printed on sheets of "chancery"-size paper. COLOPHON(leaf I7v): ... Impressus p[er] industriosum viru[m] Athoni[u]m koburger inclite Nurenberge ciuem. Anno salutis gratie .M.ccccxcij. xx. die Iunij. PAGE SIZE: 295 x 205 mm.

RARE. Koberger, Anton, ca. 1440-1513, printer.

REFERENCES: GW: 3413. • Hain, *Repertorium Bibliographicum*, 1826-38: 2510*. • NUC: 37, 427-30 [NB 0157724]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 12.

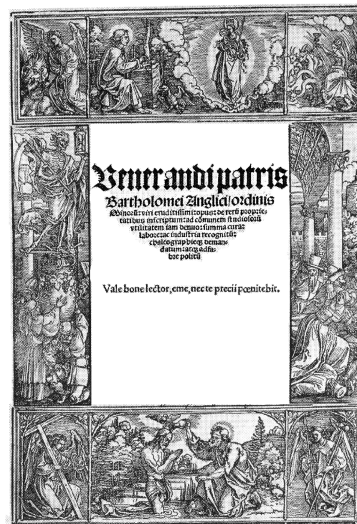
330. 1505: De Proprietatibus Rerum ... Strassburg, [Georg Husner], 9 August 1505.

2°: π^6 a⁶ b⁸ c-d⁶ e⁸ f-g⁶ h⁸ i-k⁶ l⁸ m-n⁶ o⁸ p-q⁶ r⁸ s-z⁶ A-R⁶ (R⁶ blank). RARE.

REFERENCES: NUC: 37, 427-30 [NB 0157725]. • Roller & Goodman, *Catalogue*, 1976: 1, 84. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 13. • Wellcome Catalog (Books): 1, no. 694.

331. 1519: [Contained within a fine woodcut border showing eight scenes:] Venerandi patris | Bartholomei Anglici/ordinis | Minoru ū: viri eruditissimi: opus: de rerū proprie- | tatibus inscriptum: ad cōmunem studiosorū | vtilitatem iam denuo: sum ma cura: | labore: ac industria recognitū: | chaltograp hieq deman= | datum: atq adfa= | bre politū: | Valebone lector, eme, necte precii pōnētebit.

2°: π^6 (π⁶ blank) a⁸ b-z⁶ A-E⁶ F-G⁸; 192ℓ.; no pagination or foliation. Title within a fine woodcut pictorial border, attributed to Albrecht Durer. The text contains several fine historiated initials. COLOPHON: [Nuremberg]: Per Fridericu[m] Peypus ciuem. 1519 ... 3 Maij. PAGE SIZE: 311 x 210 mm.



VENERANDI, 1519

RARE. The fine woodcut border was first used in 1517 for the *Revelationes Birgittae* published by Peypus.

REFERENCES: Adams, *Cambridge Books*, 1967: B-264. • Dodgson, *Catalogue of Early German and Flemish Woodcuts*, 1911: 1, 376, 15. • Freilich Sale Catalog: no. 34. • Index Aureliensis: 113.596. • NUC: 37, 427-30 [NB 0157727]. • Proctor, *Index*, 1898-1906: no. 11131. • VD16: B 523. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 14. • Zinner, *Astronomischen Literatur*, 1964: 1109.

332. 1601: [In red:] Bartholo- | mæi Anglici | [in black:] De Genuinis Rerum | Coelestium, Terre- | strum Et Inferarum | Proprietatibus, | Libri XVIII. | [in red:] Opus Incomparabile, Theo- | [in black:] logis, Ireconsultis, Medicis, omni- | umque disciplinarum & artium alumnis, vti- | lissimum futurum. | [in red:] Cui Accessit Liber XIX. De | [in black:] variarum rerum accidentibus. | Iam nunc noua specie, nouaque plane forma renatum, | & ab immundis mendis ad amussim repurgatum, | adiuncto Indici rerum & verborum locupletis- | simo. | Procurante | [in red:] D. Georgio Bartholodo Pon- | [in black:] ano à Braitenberg, Metrop. Ecclesiae Pra- | gensis Præposito. | Cum Saer. Caesar. [ornament] Maiest. Primil. | [in red:] Francfurti, | [in black:] Apud Wolfgangum Richterum im- | pensis Nicolai Steinii, Not. & Bibliopolæ. | [in red:] Anno M. DCI.

8°: [15], 1261, [17] p. Title in red and black.

VERY SCARCE. Note Work previously published under title: De proprietatibus rerum. Often erroneously ascribed to Bartholomaeus de Glanvilla.

REFERENCES: NUC: 37, 427-30 [NB 0157730]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 15.

333. 1609: Bartholomæi Anglici de Genuinis Rerum Coelestium, Terrestrialium et Infernarum Proprietatibus, Libri XVIII. Opus incomparabile; ac Theologis, Iureconsultis, Medicis, omniumque disciplinarum & artium alumnis utilissimum. Cui accessit liber XIX. De variarum rerum accidentibus. Procurante D. Georgio Bartholodo Pontano a Braitenberg, Metrop. Ecclesiae Pragensis Præposito. Editio secunda. Francfurti, apud Wolfgangum Richterum, sumptibus Nicolai Steinii. Anno M.DCIX.

8°: VERY SCARCE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 16.

Dutch edition

BARTHOLOMAEUS ANGLICUS

334. Dutch transl., 1485: Van den proprietyten der dinghen ... Haarlem, Jakob Bellaert, 24 December 1485.

2°: aa⁶ bb⁴ a-r⁸ [et]⁸ [long-s]⁸ s-t⁸ v⁸ u⁸ w⁸ x-z⁸ [et]⁸ 96 a⁶ A-V⁸ W⁸ X⁸ Y⁸ AA⁸ BB⁸ CC⁶ DD⁶ EE⁸; 466ℓ.; no pagination. Two columns, Gothic type, capital spaces, 40 lines, 11 woodcuts. PAGE SIZE: 269 x 193 mm.

CONTENTS: Folios, 1, Blank.; 2r (signed aa2), "Hier beghinnen de titelen d3 sijn de | namen der boeken daer men af spreke | sal en oec die capittelen der eerwaerdi= | ghen mans bartolome⁹ engelsman ..."; 10r, col. 2, line 13, end of table: "Vade giers eyeren cxi ca."; [11v], Woodcut.; 12r, "[W]Ant dye eyghent | scappen der din= | ghen volge moe | ten der substanci= | en ..."; 12v, col. 2, line 12: "Hier eyndet het prohemium: | Hier beghint bartholome⁹ anglici sijn | eerste boeck vande eygentscappen o' din | ghen | ..."; 464v, col. 1, line 8, colophon: "Hier eyndet dat boeck welck ghe= | hieten is bartholomeus vanden pro= prietyten der dinghen inden iaer ons | heren M.CCCC. en lxxxv. optē heyli | ghen kersaent. Ende is gheprint en | de oeck mede voleyndt te haerlem in hollant ter eren godes ende om lerin | ghe der menschen van mi Meester IA | OP BELLAERT gheborē van ze= | rixzee."; [465r], Printer's device.

VERY RARE. Dutch translation probably commissioned and certainly printed by Jacob Bellaert [see note below]. This is the first Dutch edition of the famous encyclopedia, and the first of all the editions to contain illustrations.

Indications are that this production was designed from the start to be a sumptuous publication. For setting the text Bellaert used a beautiful, newly designed font in the Gothic style. Each of the eleven woodcut illustrations acts as a full-page frontispiece introducing the individual sections of Bartholomaeus text. Some of these plates serve for two sections by rather ingeniously incorporating isolated motifs laid against a broad, unifying landscape. For example, stones and gems are scattered here and there along the banks of a stream on the plate that also introduces the description of plants. These illustrations are finely detailed depictions by the anonymous artist whose woodcuts in this and other of Bellaert's books has earned him the descriptor: "The Bellaert Master." The book was issued on Christmas Eve 1485 ("op Kerstavont, 1485") making this volume comparable to the modern Christmas edition. Finally, it is the only book from the press of Bellaert that is signed in the colophon as being produced by his establishment. He was obviously and deservedly proud of this publication.

The eleven woodcuts each measure approximately 200 x 140 mm. and represent Solomon as judge, seated in the middle, before him the clerk of the court, to the left Belial as prosecutor and to the right Moses, Christ's counsel for the defense (11v); the creation of angels and fall of demons (18v); the creation of Eve and anatomical man (30v); the ages of man, a physician and a surgeon attending patients (105v); the earth and the spheres (161v); occupations of the months (188v); birds (217v); fishes (233v); a landscape showing a river and towns (247v), trees, plants, stones and gems (287v) and animals and reptiles (368v). In all 32 different woodblocks were cut, and printed in continually changing combinations.

Jacob Bellaert. (BORN: Zierikzee, The Netherlands, c1450; DIED:) Dutch printer. Bellaert was the first printer in Haarlem. His earliest book was published in Lijden in December 1483. An important part of the books he printed were the splendid woodcut illustrations. The only one of his works that is signed is his issue of Bartholomaeus Anglicus's *Van de proprieteiten der dinghen* (1485). In 1486 several other titles can be traced to him as well.

The fifteenth-century illustrators of books and woodcutters are veiled in still far greater anonymity than the printers at the time. Jacob Bellaert escaped from such anonymity by once including his name in a colophon. In art history he may now serve as the namegiver for the unknown

illustrator: the Bellaert master.

The illustration shows Solomon as judge, seated in the middle; before him the clerk of the court, to the left Belial as prosecutor and to the right Moses, Christ's counsel for the defence. Three woodblocks were used, one for the centre and two for the sidepieces. In all 32 different woodblocks were cut, and printed in continually changing combinations. For the illustrations in the Belial reprints of 1512 and 1516 by the Antwerp printer Hendrik Eckert van Homberch, Bellaert's woodblocks, then 30 years old, were used again.

REFERENCES: Becker-Moelands, M.A., "Der sonderentrost. Een geïllustreerd middeleeuws rechtsboek," in: *Misdaad, zoen en straf. Aspecten van de middeleeuwse strafrechtsgeschiedenis in de Nederlanden*, Hilversum 1991, p. 48-84. • BMC XV: 9, 102 [IB 48105]. • Goff: no. B-142. • GW: no. 3423. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 2522. • Klebs, *Incunabula Scientifica*, 1938: no. 151.1. • NUC: 37, 427-30 [NB 0157733]. • Oates, *Cambridge 15th Century Books*, 1954: no. 3653. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1886. • Polain, *Catalogue*, 1932: no. 507. • Proctor, *Index*, 1898-1906: no. 9173. • Schretlen, *Dutch and Flemish Woodcuts*, 1925: 26-7. • Snyder, J., "The Bellaert master and 'De proprietatibus rerum'" (pp. 41-62), in: *The Early Illustrated Book. Essays in Honor of Lessing J. Rosenwald*, Washington, 1982. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 44. • Voulliéme (Berlin): no. 4905. • Wellcome Catalog (Books): 1, no. 693. (Bellaert) ADB. • BMC XV: 9, 101. • *Lexikon des Buchwesens*.

French editions

335. French transl., 1482: Prologue. Cy commence vng tres excellent liure nomme le proprietaire des choses [translated from the *De Proprietatibus Rerum* of Bartholomaeus Anglicus by Jean Corbichon]. End. [fol. 328 recto:] Cestuy liure des ?prietes des choses fut traslate d? latin en fracoy lan de grace . mil. ccc.lxxii ... ? le comandement de tres puissant et noble price Charles le quint de son nom ... et le traslata son petit ? huble chapelain frere iehan corbicho ... Et a este reuisite par venerable ? discrete personne frere pierre ferget. [With woodcuts.] G.L. ... Lyons, Mathias Huss, 12 October 1482.

2°: a⁸ a-x⁸ A-S⁸ T¹⁰; 330ℓ. RARE.

REFERENCES: NUC: 37, 427-30 [NB 0157761]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 19.

336. French transl., 1485: Cy commence le premier liure du proprietaire au quel tant Seullement est traicte de la Sainte trinite ... Lyon, Guillaume LeRoy, 1485.

2°: [317]ℓ.

RARE. "... fut translate de Latin en Francoys ... [par] Jehan Corbichon ... Colophon."

REFERENCES: Hain, *Repertorium Bibliographicum*, 1826-38: 2515. • NUC: 37, 427-30 [NB 0157762]. • Pellechet, *Catalogue General des Incunables*, 1970: 1881.

337. French transl., 1485/6: Le Proprietaire des Choses ... Lyons, Guillaume Le Roy, 26 January 1485/6

2°: RARE.

REFERENCES: Hain, *Repertorium Bibliographicum*, 1826-38: 2515. • NUC: 37, 427-30 [NB 0157762]. • Pellechet, *Catalogue General des Incunables*, 1970: 1881. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 18.

338. French transl., 1486: Le Proprietaire des Choses ... Lyons, Johannes Siber [after 26 January 1486].

2°: π⁸ a-z⁸ A-E⁸ F-G¹⁰; 243ℓ. RARE.

REFERENCES: BMC XV: 8, p. 252 [IC.41689]. • Fairfax Murray (French): 196. • GW: 3418. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2513. • NUC: 37, 427-30 [NB 0157763]. • Pellechet, *Catalogue General des Incunables*, 1970: 1879. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 23.

339. French transl., 1487: Le Proprietaire des Choses ... Lyons, Mathias Huss, 7 April 1487.

2°: 282ℓ. RARE.

REFERENCES: GW: 3419. • Hain, *Repertorium Bibliographicum*, 1826-38: 2516. • Klebs, *Incunabula Scientifica*, 1938: 150.5. • NUC: 37, 427-30 [NB 0157764]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 20.

340. French transl., 1491/2: *Le Proprietaire des Choses ...* Lyons, Mathias Huss, 15 March 1491/2.

2°: a-z⁸ A-B⁸; 227^{l.}; [10] 448 p., illus. Printed in double column, 57 lines to a full column. RARE.

REFERENCES: BMC XV: 8, 264 [IB.41714]. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2517. • NUC: 37, 427-30 [NB 0157766]. • Stillwell (Science): B133. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 21.

341. French transl., c1497: *Le proprietaire des choses*. Lyons, Jehan Cyber, [c1497].

2°: 252^{l.}, illus.

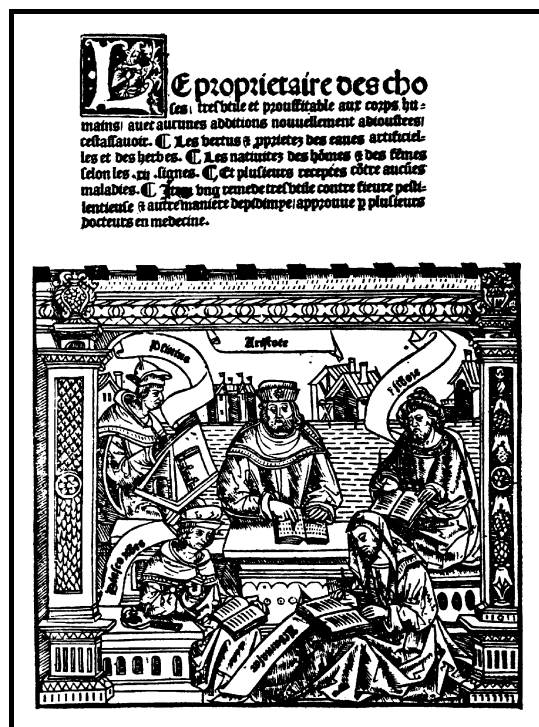
RARE. Translated in 1472 by Jehan Cobichon.

REFERENCES: BL: [IC.41639.]. • NUC: [no copy listed].

342. French transl., 1500/1?: *Le Proprietaire des Choses ...* Lyons, [Claude Davost] for Jean Dyamantier, 17 April 1500/1?

2°: RARE.

REFERENCES: GW: 3422. • Hain, *Repertorium Bibliographicum*, 1826-38: 2319. • NUC: 37, 427-30 [NB 0157767].



LE PROPRIETAIRE DES CHOSSES, 1510

343. French transl., 1510: *Le proprietaire des choses tesvtille et prouffitable aux corps humains, avec aucunes additions nouvellement adioustees, cest assavoir. Les vertus & ..pprietez des eaues artificielles et des herbes. Les nativitez des homes & des femes selon les. xij. signes. Et plusieurs receptes cote aucues maladies. Item vng remede tesvtille contre fieure pestilencieuse & autre maniere depidimye, approuvee ...p plusieurs docteurs en medecine.* [Paris, 1510]

2°: a⁸ a-z⁶ A-X⁶ AA-BB⁶; ??^{l.}; [567] p. illus. COLOPHON: ... Imprime nouvellement a Paris lan de grace mil cinq ces & dix le. xv. iour de novembre. pour Jehan

petit & Michel lenoir libraires jurez en luniuersite de paris, demouras en la rue saint Jaques. Large woodcut on t.-p.; device of Le Noir at end. Translated by Jean Corbichon. RARE.

REFERENCES: Mortimer *French Books*: no. 45. • NUC: 37, 427-30 [NB 0157769].



LE PROPRIETAIRE DES CHOSSES, 1512

344. French transl., 1512: [In black, a large ornate woodcut initial letter "L" [in red:] e proprietaire [in black:] des choses tres | utile et prouffitable [in red:] aux corps | humains [in black:] : avec aucunes additi | ons nouvellement adioustees Cestassavoir. [in red:] Les vertus [in black:] et propre | tez des eaues [in red:] artificielles: [in black:] & des herbes. Les nativitez des hommes | et des femmes selon les douze [in red:] signes. [in black:] Et plusieurs receptes contre | aucunes malladies. Item vng remede tres utile contre [in red:] fieure pesti | lencieuse [in black:] & autre maniere despydimie/ leql a este autrefois esprou | ue par plusieurs grans [in red:] docteurs en medecine. | [In black, large rectangular woodcut showing five figures seated at a table and incorporating five banners with text printed in red].

2°: a⁸ A-E⁶ F⁶ G-P⁶ Q⁶ R-X⁶ AA-EE⁶ FF² GG⁴ GG⁶ HH-UU⁶ XX² CCC⁴ AAA-DDD⁶ (F3 missigned F4; GG1 missigned GG3; CCC1 missigned CCC3); 284^{l.}; no pagination or foliation. Title in red and black with a large woodcut vignette, 25 text woodcuts and many initials letters throughout. COLOPHON: Cestuy livre des proprietiez des choses fut translate de latin en francoys. Lan de grace Mil CCC.lxxii par le commandement du treschrestien roy de france. Charles. le quint de ce nom. regnant en ce temps paisiblement. Et fut translate par son petit & humble chapelain frere iehan corbichon de lordre saint augustin. maistre en theologie de la grace & promotion dudit prince & seigneur tres excellent. Et y est adiuste les vertus & proprietiez des herbes & des eaues artificielles. Les nativitez des hommes & des femmes: & aucunes

BARTHOLOMAEUS ANGLICUS

receptes tresutiles. Avec ung souverain remede contre fievre pestilencieuse. Imprime a Rouen. En lan mil.v.cens &.xii.Le.xv. jour de novembre. Pour francoys regnauld libraire iure en l'universite de paris. Et pour Jehan mace libraire demourant a renes Et por Michel angier libraire & reliure de l'universite de caen. Et pour Richard mace libraire demourant a rouen a lenseigne des chapeletz pres de la grant eglise. Binder's title: La livre des proprietez des choses, Rowen [sic], 1512 [=Rouen, 15 November 1512]. PAGE SIZE: 280 x 190 mm.

RARE. The illustrations "are very remarkable in style and widely divergent in treatment from those in the earlier Lyons and Paris editions. They make liberal use of solid black and deeply shaded background, and in many ways strongly suggest that they are derived from metal-engravings rather than woodcut originals." (Goldschmidt)

Charles, V, King of France, 1338-1380. // Corbichon, Jean, 14th cent.

REFERENCES: Goldschmidt, Booksellers: cat. XVI, 121. • Moreau: 242. • Mortimer *French Books*: no. 46. • NUC: 37, 427-30 [NB 0157771]. • RBF: 16 V, 271, 40 [under the publisher Jean Macé in Rennes with reference to Michel Angier in Caen]. • Unknown: BBA: LXII, 22.

345. French transl., 1518: De Proprietatibus Rerum ... Paris, Jehan Petit & Michel Le Noir, 8 January 1518.

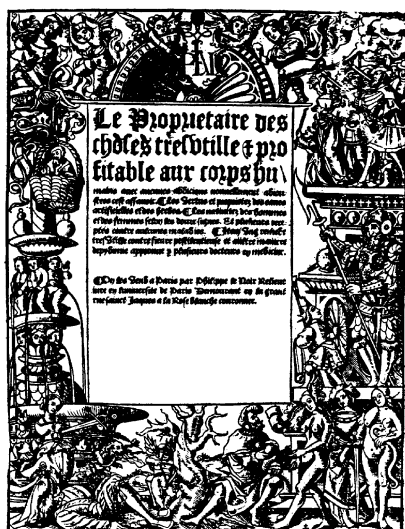
2°: RARE.

REFERENCES: NUC: 37, 427-30 [NB 0157772]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 29.

346. French transl., 1522: Le Proprietaire des choses tresvtille et profitable aux corps humains avec aucunes additions uouvellement adioustees cest assavoir. Les vertus et proprietez des eaues artificielles et des herbes. Les nativitez des hommes et des femmes selon les douze signes. Et plusieurs receptes contre aucunes maladies. Item vng remede tresvtille contre fievre pestilencieuse et autre maniere depydimie approuue par plusieurs docteurs en medecine.

2°: [8], 276 ℓ ., large woodcut showing Aristotle, Pliny, Isidore, etc. Two columns. Title page in red and black. RARE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 30.



LE PROPRIETAIRE DES CHOSES, 1525

347. French transl., 1525: Le proprietaire des choses tresvtille & profitable aux corps humains avec aucunes additions nouvellement adioustees cest assavoir. Les vertus et

proprietez des eaues artificielles et des herbes. Les nativitez des hommes et des femmes selon les douze signes. Et plusieurs receptes contre aucunes maladies. Item vng remede tesvtille contre fievre pestilencieuse et aultre maniere depydimie approuue [par] plusieurs docteurs en medecine. [1525]

2°: a⁸ a-z⁶ A-X⁶ AA-BB⁶; ?? ℓ .; [568] p., illus. Title within ornamental border containing printer's monogram; printer's mark on last page. COLOPHON: ... Nouuellement imprime a Paris. lan de grace mil cinq cens. xxv. le xx. iour de may par Phelippe le noir relieur jure en l'universite de Paris demourant en la grant rue saint Jacques a lenseigne de la rose blanche couronnee.

RARE. Translated by Jean Corbichon.

REFERENCES: BL: [1406.i.11.]. • Mortimer *French Books*: no. 46. • NUC: 37, 427-30 [NB 0157774]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 31.

348. French transl., 1528: Le proprietaire des choses tresutille et profitable aux corps humains avec aucunes additions nouvellement adioustees, cestassavoir: les vertus [et] proprietez des eaues artificielles [et] des herbes. Les nativites des hommes [et] femmes selon les douze signes. Et plusieurs receptes contre aucunes maladies. Item ung remede tresutille contre fievre pestilencieuse [et] aultre maniere depydimie approuue par plusieurs docteurs en medecine Bretaine pour Pierre Gaudoul, [1528].

2°: a⁸ a-z⁴ A-X⁴ AA-BB⁴; ?? ℓ ., illus.

RARE. Translated by Jean Corbichon. Printers device on title-page.

REFERENCES: NUC: 37, 427-30 [NB 0157777]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 32.

349. French transl., 1539: Le proprietaire des choses tresutille et profitable aux corps humains avec aucunes additions nouvellement adioustees. Cestassavoir les vertus & proprietez des eaues artificielles et des herbes. Les nativitez des ho[m]mes et des femmes selon les douze signes et plusieurs receptes contre aucunes maladies. Item ung remede tresutille co[n]tre fievre pestilencieuse et autre maniere depydimie aprouue par plusieurs docteurs en medecine. On les vend a Paris par Jehan Longis, 1539.

2°: a⁶ a-z⁶ A-P⁶ Q⁸; ?? ℓ ., illus. COLOPHON: Nouvellement imprime a Paris par Nicolas Couteau, 1539.

RARE. Translated by Jean Corbichon. Contains the same additions as the edition of 1510; the illustrations are for the most part directly copies after the cuts of the Huss editions, but they are independent of those of the 1510 and 1528 eds. Title within woodcut border by an unknown artist with the monogram, E.G. This border used in 1538 by Couteau for an edition of Boccaccio De nobles maleureux, is described by Nagler in his Monogrammisten, vol.II, no.1588.

REFERENCES: BL: [441.h.6.]. • NUC: 37, 427-30 [NB 0157778]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 33.

350. French transl., 1556: De Proprietatibus Rerum ... A Paris, Par Arnoul l'Angelier, tenant la Bouticque au second Pillier de la grand Salle des Palays, 1556.

2° RARE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 35.

351. French transl., 1556: Le Grand proprietaire de toutes choses tres utile et profitable pour tenir le corps humain en santé. Contenant plusieurs diverses maladies, et dont ilz procedent, et aussi les remedes preservatifz. Avec les proprietez du Ciel, de la Terre, des Bestes, des Oyseaulx des Pierres, et des Metaulx, et autre matiere. [By Bartholomaeus Anglicus.] ... Translaté de Latin en François, par Maistre Iean Corbichon. Additions nouvellement faictes. Les vertus et proprietez des Eaues artificielles, et des Herbes, etc. ... Paris, Louis de Banville, 1556.

2° RARE.

REFERENCES: BL: [441.h.7.]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 37.

352. French transl., 1556: De Proprietatibus Rerum ... A Paris. Par Magdalaine Bourssette, demourant Rue saint Jacques á l'Enseigne de l'Elephant, deuant les Mathurins 1556.

2° RARE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 38.

353. French transl., 1556: Le grand propriétaire de toutes choses Tresutile ... pour tenir le corps humain en santé ... Avec les proprieté du ciel, de la terre, des bestes ... Translaté de latin en françois, par ... Jean Corbichon. Additions nouvellement faictes. Les vertus ... des eaues artificielles, & des herbes. Les nativitez des hommes ... selon les douze signes, & plusieurs receptes contre aucunes maladies. Remede ... contre fiebre pestilencieuse ... Paris, Estienne Grouleau, 1556.

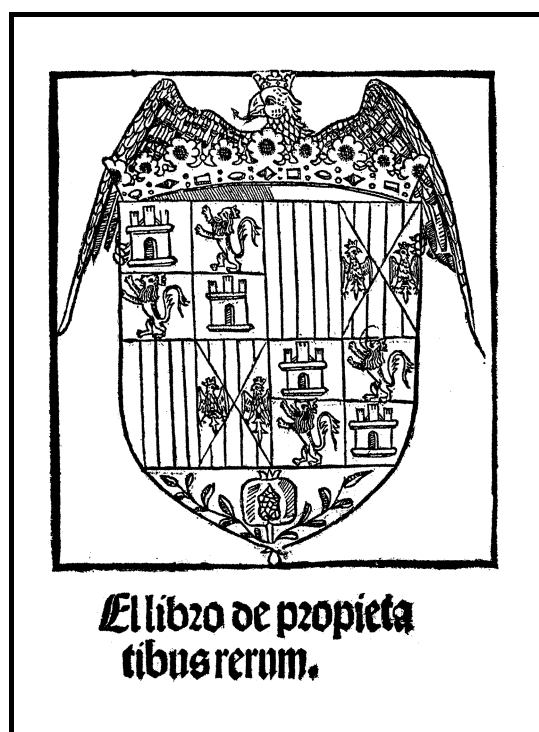
2°: [4]ℓ., ccxxiii ℓ., illus. VERY SCARCE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 39.

354. French transl., 1556: Le grand propriétaire de toutes choses. Tres vtile et profitable pour tenir le corps humain en santé. Contenant plusieurs diuerses maladies, et dont ilz procedent, et aussi les remedes preseruatifz Translaté de Latin en François, par Maistre Iean Corbichon ... A Paris, Par Anthoine le Clerc, tenant sa boutique au premier pillier de la grand Salle du Palays, 1556.

2°: [6], ccxxliijℓ. RARE.

REFERENCES: Voigt, *Bartholomaeus Anglicus*, 1910: no. 40.



EL LIBRO DE PROPIETATIBUS RERUM, 1494

Spanish editions

355. Translation, First edition, 1494: [Woodcut] | El libro de propietatibus rerum.

2°: a⁶ a-m⁸ n⁶ o⁶ A-M⁸ aa⁶ bb-ee⁸ ff-gg⁶ hh-oo⁸ pp⁴; 320ℓ.; no pagination. 18 woodcuts. 3 columns, 47

lines. Printer's mark on the verso of the last leaf. Title vignette (arms of Castile and Aragon).

COLOPHON: Fenece el libro delas cosas trasladado de latin en romance/por el reveredo padre fray vicente de burgos. Emprimido en la noble cibdad [sic] de tholosia por henrique meyer d'alemana a honor de dios & d' nuestra senora & al prouecho de muchos rudos & ynorantes. acabo fe enel ano del senor de mil & quatro cientos & nouenta quatro a diez & ocho del mes de setiembre. PAGE SIZE: 295 x 215 mm.

CONTENTS: Folios 2r (a2), "Comiēça la tabla del libro del propietatibus rerum. | Libro primero que trata de dios & su effençia."; 6r, line 35, "El prologo del autor. | [C4]Omo las autoridades diuinas & humanas testificā las propiedades delas cosas figuē las | mesmas fustaçias/ ..."; 7r, "Comiença el libro delas | propiedades delas cosas. | [C9]Onsiderando & mas | que podido he en mi | coraçon/reboluiēdo | en todo obrar quāto | es grāde nuestra fla- | queza/ ..."

VERY RARE. First printing of the Spanish translation done in 13?? by Vicente de Burgos [see note below]. The printer was Henricus Mayer [see note below] of Toulouse, and the work was completed on 18 September 1494.

First Spanish edition of the great encyclopedia of natural science compiled circa 1235 by the Franciscan Bartholomew from England, who taught theology at Paris and later at the school of his order at Magdeburg. The work is a summary of knowledge current among educated men of the Middle Ages. It is arranged by subject in 19 books (God and the angels, the soul, the human body, physical geography, mineralogy; fauna and flora; colors; odors, weight and measures, musical instruments, medicine etc...) and is much more extensive than any earlier books on the same subject. Especially the Geography chapter (Libro XV "Delas provincias") shows an advanced state of knowledge, describing 173 countries and provinces. "The political geography of Europe contains a quantity of information which had not been put together before." Sarton, II, 586.

This extremely rare incunable is illustrated with 18 large woodcuts, including one repeat and the arms of Castile and Aragon on title; woodcut printer's device at the end, 6 woodcut diagrams including a small T-map on leaf 179. The woodcuts include a depiction of physicians with a patient, people working in a mine, birds, a larger one of the zodiac etc... They appear to be very free copies of those in Mathias Huss' French editions of 1485 and 1491/92.

Vicente de Burgos. (BORN: ; DIED:) *Spanish jesuit*. Burgos lived in the second half of the fifteenth century, and was the Spanish translator of Bartholomaeus Anglicus.

Henricus Mayer. (BORN: ; DIED:) *Spanish printer*.

[BIOGRAPHY NEEDED]

REFERENCES: BL: [940.f.7.]. • BMC XV: 8, 360. • Goff: B-150. • GW: no. 3424. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 2523. • IGI: 1261. • Klebs, *Incunabula Scientifica*, 1938: 152.1. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 303-4, no. 1021. • NUC: 37, 427-30 [NB 0157781]. • Oates, *Cambridge 15th Century Books*, 1954: 3261. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1887. • Polain, *Catalogue*, 1932: 508. • Proctor, *Index*, 1898-1906: no. 8722. • Vindel, F., *El arte tipográfico en España durante el siglo XV*, Madrid, 1945-54. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 45. • Voulliéme (Berlin): no. 4786. (Burgos) Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 105. (Mayer)

356. Abridgement, 1495: Tratado d' los metales & piedras | preciosas: & de sus virtudes.

4°: a-d⁸ e⁶; 38ℓ.; no pagination. 2 columns, 31 lines.

CONTENTS: Folios 1r, Title.; 2r (a2), "Comiēça vn tractado delas piedras y | metales: y de sus priedades y virtudes: el qual fue | compuesto por fray Bartholome

BARTHOLOMAEUS ANGLICUS

yngles &c. | Del arena. Capitulo .j. | [A]Rena es asi dicta
..."; 37r, line 27, "... E con | esto dicho delas piedras &
metales ponemos fin ala | presente obra."; 37r, "Siguese
la tabla dela obra presen | te ..."; 38r, col. 2, line 22, "Deo
gratias."; 38v. Blank.

VERY RARE. Separate printing by Paul Hurus [see note below] of the section on metals and stones from the 1494 Spanish edition. Because of its early date, this work is one of the first separate books to solely treat mineralogy, and it is preceded by Albertus Magnus and several early lapidaries.

Paul Hurus. (BORN: ; DIED:) *Spanish printer.*

BIOGRAPHY NEEDED

REFERENCES: GW: no. 3425. ● Haebler, *Bibliografía Iberica*, 1903-17: 2, 15, no. 40(5). ● NUC: [no copy listed]. ● Vindel, F., *El arte tipográfico en España durante el siglo XV*, Madrid, 1945-54. (Hurus)

xi. del ayre & sus impresiones | El. xii. delas aues. | El.
xiii. delas aguas | El. xiiii. dela tierra & mōtañas | El. xv.
delas pronicias ōl mūdo | E. xvi. delas piedras & metales.
| [Start of column three:] El. xvii. ōlof ardōles plātas &
yrūras | El. xviii. delos animales. | El diez & nueve delos
colores: ōlo | res: sabores: licores: & ōlos hucudo | El.
xx. & vlrmo delos numeros:& | delas medidas & pesos
& instirū= | mentos y sones. | [End of columns.] Lo
qualto do porsus caplos largamēre se veraporla tabla.

2^o: A⁶ 2A⁸ B-Y⁸ a-v⁸ x⁴; 346*l.*; no pagination. Title in red and black, title vignette, woodcut illustrations, double column, capial spaces with guide letters and paragraph marks. Printed in 1529 in Toledo by Gaspar de Avila, at the cost of Joan Thomas Fabio.

COLOPHON: Aqise acaba el catholico & muy proueohoso libro delas propiedades de todas las cosas trasladado de latin en romance. Por el reuerendo padre fray Vincente de burgos, y agora nueuamente corregido & ynpreso enla imperial ciudad de Toledo, en casa de Gaspar de auala ynpresor de libros, a costa y espensas del noble varon Ioan thomas fabio milanese vezino de Segouia: Acado se a diez dias del mes de Iulio, del año de mil & quinientos yeynte y nueue años.

RARE. Translated by the priest, Vincente de Burgos from a Latin edition of *De proprietatibus rerum*.

REFERENCES: Anderson, *Illustrated History of the
Herbals*, 1997: 59-65. • Hoover Collection: no. 94. • NLM
16th Century Books (Durling): no. 477. • NUC: 37, 427-
30 [NB 0157782]. • Shaaber, *English Seventeenth Century
Imprints*, 1978: B-83. • Voigt, *Bartholomaeus Anglicus*, 1910:
no. 46.

English editions

358. Translation, First edition, 1495: *De Proprietatibus Rerum*
... [Westminster:] Wynkyn de Worde. [about 1495].

2 vols. [VOL 1] 2°: A⁶ B⁸ b⁶ c-z⁸ [et]⁶ [con]⁸; 202ℓ.; no pagination or foliation. Two columns, 42 lines, capital spaces. The xylographic title is cut in a single block and is printed with white letters on a black ground. The block is repeated on the verso of signature oof. [VOL 2] 2°: A-U⁸ X-Z⁶ aa-cc⁸ dd-gg⁶ hh-mm⁸ nn⁴ oo⁶; 276ℓ.; no pagination or foliation. Two columns, 42 lines, capital spaces, 9 woodcuts. PAGE SIZE: 311 x 214 mm.

CONTENTS: [Vol 1] Folios, 1r, Xylographic title, with white letters on black background: “Bartholomeu³ de | proprietatibz re⁴.”; 1v, “In noie patris z filii z spūssācti .ā. | Assit principio sancta maria meo. | [C3]Rosse was made all of red | ..”; 2r, col. 1 (signed A2): “Prologue of the translatur. | [T3]Rue it is. that after the noble z | experte doctryne of wyse z well | lernyd. Philosophers. ...”; 3r (signed A3): Woodcut, followed by, “Incipit liber .i. de. trinitate z de. capl^{is} istorū librorū sequenc.”; 202r, col. 2, line 5: “...¶ But this that is sayd shal | fussyse at this tyme/ After these forsayd bokes thus treated. we shall procede by | the helpe of Jhesu in the twelfth boke. and soo of the other,” followed by a printer’s mark.; 202v, Blank.

[Vol 2] Folios, 1r, Woodcut, followed by, "Incipit liber .xij. de Aubi⁹ in | generali et speciacili .Ca. J | [F6]Or the treatise is ended | of the proprieties of the | ayre and of thȳges that | ben gendryd therin/ ..."; 273v, col. 2, line 27 (signed oo3): "... That is the hyghe god | and glorious lyuynge and reynynge e= | uer more without ende. AMEN. | [E]ndlesse grace. blysse. thankyn ȝ pray | syng vnto our lorde god Omnipotent | be gyuen by whoos ayde and helpe this | manflaçon was endyd at Berkelewe the | fyrte daye of feuerer. the yere of our lor | de .M.CCC.lxxxvij. the yere of ȝ rey | ne of Kyngye Rycharde the seconde after | the Conqueste of Englonde .xxij. The | yere of my lordes aage fyre Thomas lor | de of Berkelewe that made me to make | this Translaçon. xlvij."; 274r, col. 1 (signed oo4): "¶ Thyse ben the Auctours that ben | alledgyd in thyse sorsayd bokes."; 274v, "Prohemium Bartholomei | de proprietatibus rerum."; 276r, Printer's mark.; 276v,



LIBRO DE PROPRIETATIBUS, 1529

357. Translation, 2nd edition, 1529: Libro de proprietatibus rerum in romance. | [Large woodcut vignette, consisting of a three by three matrix of smaller scenes related to topics in the text.] | Hystoria natural: do se tratã las propiedades de todas las cosas. | Es obra catholica & muy proueçosa: que cõtïene mucha doctrina de theologia: hablando | de Dios: & mucha filosofia moral & natural hablando de sus criaturas. Va acopañada de | grandes secretos de astrologia: mediina: cirugia: geometria: musica & cosmografia. Cõ | otras sciencias en. xx. libros siguientes. | [The following descriptions of the various books are arranged in three columns.] | ¶ Libro. j. dēdios & essencia. | El. iii. dios āgeles buẽs& malos | El. iii. del anima. | El. iii. õlos hũores y ciẽtos. | El. v. del hõbre y fus partes | El. vi. delas hedades | El. vii. delas eufermades | El. viii. õl cielo y mũdo & plaetas | [Column two starts:] El. nouens del tiempo. | El. x. dela materia & forma. | El.

Xylographic title repeated with the white on black wording, "Bartholomeu³ de | proprietatibz rerū."

VERY RARE. Translation by John Trevisa [see note below] of *De Proprietatibus Rerum* and printed from a manuscript copy by Wynkyn de Worde [see notes below]. The 19 woodcut illustrations in the text are based on those in the Dutch 1485 edition and various French editions published in Lyon.

This is the first English book printed entirely on paper made in England. The "chancery" size format was manufactured by John Tate (so credited in the colophon) at the first English mill established in the 1490's. In the nineteenth century a copy of Trevisa's manuscript was presented to the library at Columbia University by George Plimpton. It is described as an "English manuscript on vellum, of 388 leaves, England, circa 1440. It is John of Trevisa's translation of Bartholomaeus' comprehensive thirteenth century encyclopedia and bears printers' marks throughout, indicating that type was set from this copy for the first edition printed in England by Wynkyn de Worde in 1495."

John de Trevisa. (BORN: Crocadon, in St. Mellion, near Saltash, Cornwall, England, 1362; DIED: Berkeley, England, 1412) *English translator.* Trevisa was a fellow of Exeter College, Oxford from 1362 to 1369. Later he became a fellow of Queen's College, but was expelled in 1379 by the Archbishop of York for unworthiness. Prior to 1387, he entered into the service of Thomas, 4th Baron of Berkeley, as chaplain and vicar of Berkeley. Trevisa was not an original writer, but a diligent translator, whose works became the source for many English incunabulum.

Wynkyn de Worde. (BORN: Worth, Alsace, France, ; DIED: London, England?, 1534?) *French printer & stationer.* His real name was Jan van Wynkyn ('Worde' being merely a place name). As a young man, he came to England and was employed as an apprentice in the printing establishment of William Caxton. He probably accompanied Caxton to Bruges in 1476. In 1491, after Caxton's death, Wynkyn took over the printing business in Westminster. Between 1493 and 1500, Wynkyn issued at least 110 different works. This remarkable output continued until his death making his press more prolific than any other printer in operation before 1600.

REFERENCES: Duff, *Fifteenth Century English Books*, 1917: no. 40. • Goff: no. B-143. • GW: no. 3414. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 2520. • Klebs, *Incunabula Scientifica*, 1938: no. 154.1. • NUC: 37, 427-30 [NB 0157741]. • Oates, *Cambridge 15th Century Books*, 1954: no. 4144. • Proctor, *Index*, 1898-1906: no. 9725. • Stillwell, *Awakening Interest in Science*, 1970: 4, 595. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 41. (Trevisa) DNB: 19, 1139-40. • Wilkins, H.J., *John Wycliffe and John de Trevisa*, London, 1915. (Worde) BBA: I 1196, 137-146. • DNB: 21, 914-6. • Grabhorn, R., *A short account of the life and work of Wynkyn de Worde, with a leaf from the Golden legend, printed by him at the Sign of the Sun in Fleet Street, London, the year 1527*, San Francisco, The Book Club of California, 1949. • Moran, J., *Wynkyn de Worde, father of Fleet Street*, London, Wynkyn de Worde Society, 1976. • Plomer, H.R., *Wynkyn de Worde & his contemporaries from the death of Caxton to 1535; a chapter in English printing*, London, Grafton & Co., 1925. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI.

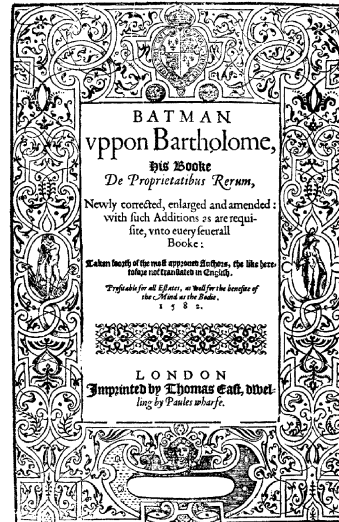
359. Translation, 2nd edition, 1535: Anno . M . D . XXXV. | Bertholome Vs De | Proprietati Bvs | Rerum. | Londini In Aedibus Tho- | mae Bertheleti Re- | gi Impressoris. | Cvm Privilegio A Re- | ge Indulto.

2^o: [Heuron]⁸ A-Zz⁶ a-s⁶ t⁴; 396ℓ.; [16] p., CCCLXXXVI (i.e., CCCLXXXVIII; Folio CCCLXXXVIII misnumbered CCCLXXXVI) ℓ., illus., title in red and black, title vignette, double column.

RARE. Translated by John Trevisa. Called the second English edition.

REFERENCES: Hoover Collection: no. 94. • NLM 16th

Century Books (Durling): no. 476. • NUC: 37, 427-30 [NB 0157745]. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 43.



DE PROPRIETATIBUS RERUM, 1582

360. Translation, 3rd edition, 1582: [Contained within an ornamental border:] Batman | vppon Bartholome, | His Booke | De Proprietatibus Rerum, | Newly corrected, enlarged and amended: | with such Additions as are requi- | site, vnto euery seuerall | Booke: | Taken forth of the most approued Authors, the like here- | tofore not translated in English. | Profitable for all Estates, as well for benefite of | the Mind as the Bodie. | 1582. | London | Imprinted by Thomas East, Dwel- | ling by Paules wharfe. 8^o: π² ¶¶⁶ ¶⁶ B-Cccc⁶; ??ℓ.; [28], 426 numbered leaves, illus. Title within an ornamental border.

RARE. Edited by Stephan Batman [see note below]. East, Thomas, 1540?-1608?, printer.

Facsimile reprint, 1976: Bartholomaeus Anglicus: Batman vppon Bartholme: His Booke De Proprietatibus Rerum Edited with an introduction and a new index by J. Schaefer. London, 1976. 8^o: xxxiv, 441 p., Facsimile reprint of the 1582 edition, *Anglistica & Americana Series*, No. 161.

Stephen Batman. (BORN: ; DIED: Leedes, Kent, England?, 1584) *English theologian.* Batman attended Cambridge where he gained a reputation as a learned man and an excellent preacher. After graduation, he was selected by the Archbishop as a domestic chaplain, and employed him in collection of the library of Corpus Christi College, Cambridge. In 1573, he was appointed rector of Merstham in Surrey. In 1582 he was one of the domestic chaplains of Henry Cary, Lord Hunsdon. He resided for some time at Leedes, in Kent.

REFERENCES: Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 177. • NUC: 37, 427-30 [NB 0157748]. • Shaaber, *English Seventeenth Century Imprints*, 1978: B-82. • Voigt, *Bartholomaeus Anglicus*, 1910: no. 43. • Wellcome Catalog (Books): 1, no. 695. (Batman) DNB: 1, 1334.

361. 1893: *Mediaeval Lore.* An epitome of the science, geography, animal and plant folk-lore and myth of the Middle Age: Being classified gleanings from the encyclopedia of Bartholomew Anglicus on the properties of things. Edited by Robert Steele. With a preface by William Morris ... London, Elliot Stock, 1893.

8^o: x, 154, [2] p., [2] adverts. p.

VERY SCARCE. Translated from the Latin by John de Trevisa. "Sources": p. 139-143. Bibliography: p. 145-146.

BARY

Trevisa, John, d. 1402, tr. / Steele, Robert, 1860-1944, ed.

REFERENCES: NUC: 37, 427-30 [NB 0157754].

362. 1905: Mediaeval lore from Bartholomaeus Anglicus. London, Alexander Moring, ltd., 1905.

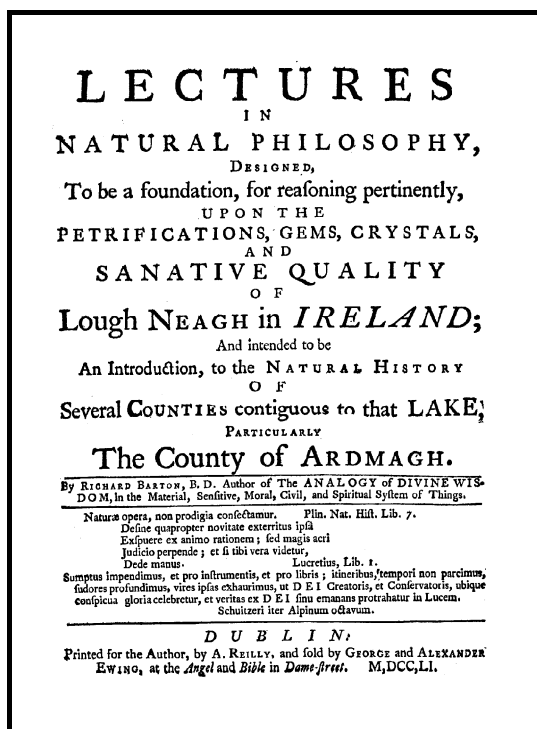
8°: xv, 195 p., frontispiece.

VERY SCARCE. With added series title, engraved, and second half-title. Translated from the Latin by John Trevisa. "Sources": p. 173-180. Bibliography: p. [181]-184.

Trevisa, John, d. 1402, tr. / Steele, Robert, 1860-1944. / Morris, William, 1834-1896.

Reissued: 1907 and 1924.

REFERENCES: NUC: 37, 427-30 [NB 0157755].



BARTON, Richard. (BORN: 1722; DIED: 1751?) *Irish naturalist.*

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 76, 98-101; II 1285, 439. • Crone, *Concise Dictionary of Irish Biography*, 1937. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • Webb, *Compendium of Irish Biography*, 1878.

363. — English, 1751.

Lectures | in | Natural Philosophy, | Designed, | To be a foundation, for reasoning pertinently, | upon the | Petrifications, Gems, Crystals, | and | Sanative Quality | of | Lough Neagh in Ireland; | And intended to be | An Introduction, to the Natural History | of | Several Counties contiguous to that Lake, | Particularly | The County of Ardmagh. | [rule] | By Richard Barton,

B.D. Author of the Analogy of Divine Wis- | dom, in the Material, Sensitive, Moral, Civil, and Spiritual System of Things. | [rule] | [...9 lines of Latin quotation...] | [rule] | Dublin: | Printed for the Author, by A. Reilly, and fold by George and Alexander | Ewing, at the Angel and Bible in Dame-street. M,DCC,LI.

4°: π^4 B⁸ C-Z⁴ Aa-Bb⁴ Cc²; ℓ ; [i]-xvi, [10], [1]-209, [1] p., 6 engraved plates (3 folding), one map, illus. PAGE SIZE: 280 x 210 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication, signed Richard Barton.; [iv], Blank.; [v]-xvi, "The | Author | His friendly Address | To His | Countrymen."; [8 pgs], "A | List | Of the Names of | Subscribers."; [1 pg], Sectional title page.; [1 pg], Blank.; [1]-209, Text.; [1 pg], "...Some Remarks..."

PLATES: Plates consist of: Frontispiece, A Prespective View of Lough Neagh. Pl. 2, Geometric figures (folding). 3-4, Geological specimens. 5, Map (folding). 6, Mineral specimens (folding). 7, Fossil shells.

VERY SCARCE. Essentially a series of lectures on the natural history and geology of Ardmagh county, Ireland. But, in the style of the day, the author has attempted to cast it into the Newtonian mold of propositions, demonstrations, and lemmas, thus to give it a more 'mathematical' air. Most of the lectures are centered on the geology, mining and mineralogy of the region, and thus provide an interesting 18th century perspective.

REFERENCES: BL: [461.k.19.(1.)]. • BMC: 6, 61. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 288. • LKG: XIV 418. • Roller & Goodman, *Catalogue*, 1976: 1, 84. • Ward & Carozzi, *Geology Emerging*, 1984: no. 130.

364. — English, 1751.

Some Remarks, towards a full description of Upper and Lower Lough Lene near Killarny, in the County of Kerry. Dublin, S. Powell, 1751.

8°: 14 p., illus. VERY SCARCE.

REFERENCES: BL: [461.k.19.(2.)]. • LKG: XIV 419a. • Ward & Carozzi, *Geology Emerging*, 1984: no. 131.

BARY, René. *French author.*

Wrote on rhetoric, philosophy and morals.

365. — French, 1671.

La Physique, où selon les anciens et les modernes il est traité de tout ce qu'il y a de plus curieux dans la nature, est divisée en trois tomes et dans le troisième tome, il est métaphysiquement traité de Dieu, par René Bary. A Paris, Chez Jean Couterot, [1671].

3 vols. [VOL 1] 12°: [24], [1]-426, [8] p. [VOL 2] 12°: [10], pp. 427-757, 244, [4] p. (Contenant, Les Elemens, les Metheores, les Pierres, les Mineraux & les Plantes). [VOL 3] 12°: pp. 245-731, [10], 76 p. (Contenant Les Oyseaux, les Poissons, les Quadrupedes, l'Homme; & enfin l'Ame raisonnable).

VERY RARE. In this general work describing the three realms of the natural world, volume two treats stones, minerals and fossils.

BASEDOW, Herbert. (BORN: Kent Town, Adelaide, Australia, 27 October 1881; DIED: Kent Town, Adelaide, Australia, 4 June 1933) *Australian geologist & explorer*.

REFERENCES: *Australian Dictionary of Biography*: 7, p. 202-203.

366. — English, 1907 [Collection catalog].

Catalogue of the Minerals in the Technological Museum of the South Australian School of Mines and Industries. Adelaide, C.E. Bristow, Govt Printer, 1907.

8°: 200 p.

VERY SCARCE. Data on locality and source of the mineral species in the Museum, organized according to the system of E.S. Dana (*Descriptive Mineralogy*, 6th edition, 1901).

REFERENCES: Ferguson, *Bibliography of Australia*, 1941-69. • NUC.



BASILIVS VALENTINUS

BASILIVS VALENTINUS.

Supposed Benedictine monk of the fourteenth century, but no trace of him has ever been found in the monasteries of Germany, where he supposedly worked. Current research suggests that this name is more likely a pseudonym for JOHANN THÖLDE, who wrote the *Haligraphia* in 1603, a work on the mineralogy and economy of salt.

REFERENCES: Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Poggendorff: 1, cols. 112-3.

367. — German, 1604 [First edition].

Triumph Wagen Antimonii Allen / so den grund suchen der uhralten Medicin/ Auch zu der Hermetischen Philosphey beliebnis tragen / Zu gut publiciret / und an Tag geben / Durch Johann Thölden. Mit einer Vorrede/ Doctoris Joachimi Tanckii. ... Leipzig, In verlegung Jacob Apels. Druckts Jacob Popporeich. 1604.

8°: [44], 694 (i.e., 622), [29] p. Pages 608-622 incorrectly numbered 680-694; other errors in paging. Title page in red and black.

RARE. In the *Triumph Wagen Antimonii*, the author made the first detailed description of antimony and its compounds (preparation of antimony trioxide).

This work brings together many facts and speculations on the chemistry of antimony, its combinations and its use in medicine. The descriptions of the preparations of the various compounds are written in a clear style. The book also contains translations of the works of Bacon, Rodocher and Issacus Hollandus. Many chemical preparations of the first importance are described in this work, and Basilius Valentinus has been hailed as the Father of Modern Chemistry. In his honor the mineral valentinite, an antimony oxide, was named in the nineteenth century.

The book contains the following treatises, which are followed by an index: 1. Triumph Wagen Antimonii, Fratriv Basiliiv Valentini (p. 1-264). 2. Von der Tinctur oder Oleo Stibii, Rogeri Baconis Angli (p. 265-296). 3. Von den Particular und Universal Tincturen (p. 297-397). 4. Vom Stein der Weisen; Theorica unnd Practica Georgii Phædronis Rodocheri (p. 399-450). 5. Der uhralter Ritterkrieg (p. 451-476). 6. Opus Saturni Isaaci Hollandi (p. 477-523). 7. Philosophisch Betrachtung, von der materia Lapidis und seiner Bereitung (p. 525-574). 8. De occulta philosophia chemicorum (p. 577-694, i.e., 622).

REFERENCES: Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Roller & Goodman, *Catalogue*, 1976: 1, 85. • VD17: 12:111147B. • Wang, Chang Yu., *Antimony: its history, chemistry, mineralogy, geology, metallurgy, uses, preparations, analysis, production, and valuation; with complete bibliographies*. Second edition. London, Charles Griffin and Co., 1919. x, 217 p., illus: [p. 2-3].

368. 1611: TriumphWagen Antimonii, Fratriv Basiliiv Valentini, Benedicter Ordens Allen/ so den Grund suchen der uhralten Medicin/ Auch zu der Hermetischen Philosophy beliebnis tragen/ Zu gut publiciret/ und an Tag geben/ Durch Johann Thölden Hessum. Mit einer Vorrede/ Doctoris Joachimi Tanckii ... Leipzig, Apel; Leipzig, Am Ende, 1611.

8°: [32], 598, [24] p. Title page in red and black. VERY SCARCE.

REFERENCES: VD17: 32:645972Q.

369. 1624: Triumph Wagen Antimonii Fratriv Basiliiv Valentini ... geben durch Johann Thölden ... Leipzig, In Vorlegung Bartholomaei Voigts, gedruckt bey Friederich Lanckisch, 1624.

8°: [30], 598, [24] p.

RARE. Preface dated 1 May, 1604 by Joachim Tanckius & dedic. poems. This ed. also contains poems by Roger Bacon et al. Text in German and Latin. Includes index.

370. 1676: Triumph-Wagen Antimonii. Samt noch sieben andern Tractätlein an den Tag gegeben durch J. Thölden. Nürnberg, Lochner für Hoffmann, 1676.

8°: [14], 467, [20] p. Engraved frontispiece. RARE.

REFERENCES: Caillet, *Manuel*, 1912: no. 809. • Chorinski: p. 964. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 47. • Ferchl: p. 25. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 78. • Honeyman Sale: no. 240. • Kopp, *Geschichte der Chemie*, 1843-7: 1, p. 29. • NLM 17th Century Books (Krivatsy): no. 874. • Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Schmieder, *Geschichte der Alchemie*, 1927: p. 205. • VD17: 3:602177H.

English Editions

371. — English, 1661.

The triumphant chariot of antimony being

BASILIVS VALENTINVS

a conscientious discovery of the many real transcendent excellencies included in that mineral written by Basil Valentine; by J.H. Oxon. London, Printed for W.S., 1661.

8°: 175 p., illus.

RARE. Subject Antimony – Therapeutic use – Early works to 1800.

REFERENCES: Partington, *History of Chemistry*, 1961-70: 2, p. 183-203.

372. — English, 1678.

Basil Valentine, his Triumphant chariot of antimony, with annotations of Theodore Kirkringius. M.D. With The true book of the learned Synesius, a Greek abbot, taken out of the emperour's library, concerning the philosopher's stone. London, D. Newman, 1678.

12°: [18], 1-160 p. [2], 163-176 p. "The true book" has special t.-p. "The true book" has special t.-p. Illustrated with 5 engraved plates, showing chemical vessels, retorts etc. PAGE SIZE: 175 x 105 mm.

RARE. This translation (the second in English) of Valentine's famous treatise was made by Richard Russell, who translated several alchemical works in the 17th Century. It was first published in 1604 and is regarded as one of the earliest monographs on a chemical element ... there is no doubt but that his treatise brought together into one volume the facts of the chemistry of antimony and its combinations, and its uses in medicine in a form that made his book the standard work on that subject for many decades. The work is, in far as its chemistry is concerned, clear and comprehensible for its time.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: 49. • NLM 17th Century Books (Krivatsy): 879. • Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Sallander, *Bibliotheca Walleriana*, 1955: no. 11056. • Stillman, *Story of Early Chemistry*, 1924: p. ?? • Wellcome Catalog (Books): 2, p. 111.

373. 1893: The Triumphal Chariot of Antimony. By Basilius Valentinus. With The Commentary of Theodore Kerkringius - A Doctor of Medicine. Being the Latin Version published at Amsterdam in the year 1685 Translated into English with a biographical preface by A.E.Waite. London, James Elliott and Co., 1893.

12°: xxxiii, 204 p., illus. Engraved frontispiece of the Chariot. Engraved title page. Edited by A.E. Waite.

VERY SCARCE. An extremely uncommon, almost legendary book on European Alchemy, rendered into English for the first time in 1893.

REFERENCES: Partington, *History of Chemistry*, 1961-70: 2, p. 183-203.

374. — English, 1671 [English transl.].

Of natural & supernatural things: also of the first tincture, root, and spirit of metals and minerals, how the same are conceived, generated, brought forth, changed, and augmented [by] Basilius Valentinus. Translated out of high Dutch by Daniel Cable; whereunto is added Frier Roger Bacon, Of the medicine or tincture of antimony; Mr. John Isaac Holland, his Work of Saturn; and Alex.

Van Suchten, Of the secrets of antimony. London, Printed and are to be sold by Moses Pitt, 1671.

8°: 238 p., [8], 122 p.

RARE. Cable, Daniel. // Bacon, Roger, 1214?-1294. // Hollandus, Johan Isaac, 15th cent. // Suchten, Alexander von, ca. 1520-ca. 1590.

REFERENCES: Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Wing: B-1020.

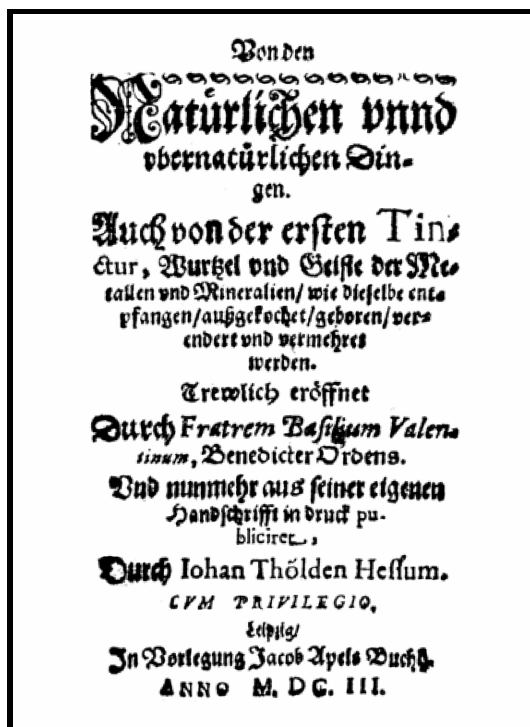
375. Latin transl., 1671: Commentarius in Currum Triumphalem. Antimonii Basili Valentini, á se Latinitate donatum. Amsterdam, Andreae Frisii, 1671.

12°: Engraved frontisp. (by R. de Hooge), (22), 342, (18) p. Engraved title vignette. With all 5 full-page engravings in the text (showing chemical apparatus).

RARE. First latin edition of his Commentary on Basilius's work on antimony, together with the text of "Currus". "Kerckring practised medicine several years in Amsterdam, and was highly estimated for his learning, skill, and acumen, by Leibnitz....and others" (Ferguson).

1685: Another edition. Osler, no. 4148.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 78, 458.



TRACTAT, 1603

376. — German, 1603 [First edition].

Von den natürlichen vnd ubernatürlichen Dingen trewlich eröffnet durch Fratr Basilium Valentium ... im Druck publiciert durch Iohan Thölden Hessem. Leipzig, In Vorlegung Jacob Apels, 1603.

8°: [8], 124, [2] p.

RARE. This alchemical work contains in chapter 2 is the authors Von der ersten Tinctur, Wurtzel und

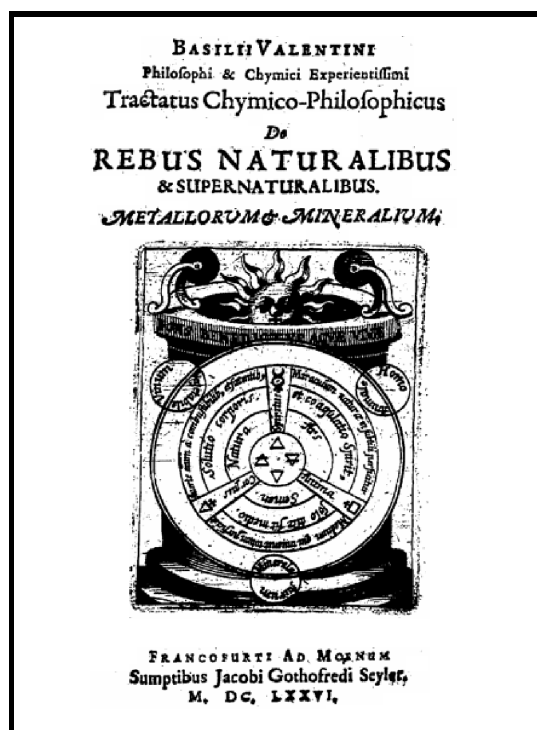
Geiste der Metallen und Mineralien. Important preface addressed to his brother-in-law, Joachim Tanckius und Johann Hartmann, 20. December 1602.

REFERENCES: VD17: 12:65568L.

377. 1611: Von den Natürlichen unnd ubernatürlichen Dingen Auch von der ersten Tinctur, Wurtzel und Geiste der Metallen und Mineralien/ wie dieselbe empfangen/ außgekochet/ geboren/ verändert und vermehret werden / Trewlich eröffnet durch Fratrem Basilius Valentini, Benedicti Ordens. Unnd nunmehr aus seiner eigenen Handschrift in Druck publiciret, Durch Johann Tholden Hessem ... Leipzig, Apel; Leipzig, AmEnde, 1611.

8°: [8], 119, [4] p. Title in red and black. RARE.

REFERENCES: VD17: 14:628347G.



TRACTATUS, 1676

378. — Latin, 1676 [Latin transl.].

Basilius Valentini | Philosophi & Chymici Experientissimi | Tractatus Chymico-Philosophicus | De | Rebus Naturalibus | & Supernaturalibus. | Metallorum & Mineralium. | [vignette] | Francofurti Ad Moenum | Sumptibus Jacobi Gothofredi Seyler. | M. DC. LXXVI.

8°: 64 p.

RARE. Translation of *Von den natürlichen unnd ubernatürlichen Dingen*.

REFERENCES: LKG: XVI 55. • Partington, *History of Chemistry*, 1961-70: 2, p. 183-203.

379. Reissue, 1679: Basilius Valentini Philosophi & Chymici Experientissimi Tractatus Chymico-Philosophicus De Rebus Naturalibus Et Supernaturalibus: Metallorum & Mineralium. Francofurti ad Moenum, Seyler, 1679.

8°: 64 p. RARE.

REFERENCES: VD17: VD17 23:664474E.

380. — Latin, 1646.

Currus triumphalis antimonii. E germanico in latinum versum operâ P. J. Fabri. Toulouse, P. Bosc, 1646.

8°: [26], 398 p., title page vignette.

RARE. With detailed marginal comments by the French alchemist P. Fabri printed throughout the text, which provide early Latin explanations to one of the basic alchemical texts.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 48. • Partington, *History of Chemistry*, 1961-70: 2, p. 183-203. • Wellcome Catalog (Books): 2, p. 111.



BATSCH

BATSCH, August Johann Georg Carl. (BORN: Jena, Germany, 28 October 1761; DIED: Jena, Germany, 29 September 1802) *German botanist & naturalist*.

Batsch attended the University of Jena, being awarded an M.D. Subsequently, he became a professor of natural history at the University, later taking on the rôle of professor of medicine and philosophy. He researched fungi, and created an system of classification for domestic plants in 78 families and 9 classes.

REFERENCES: ADB: 2, 132-33. • DBA: I 59, 390-415. • Günther, *Lebensskizzen der Professoren*, 1858. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Killermann, S., "August Johann Carl Batsch (1761-1802)," *Zeitschrift für Polzkunde (Deutsche Gesellschaft für Pilzkunde)*, 5 (1925), 285-89. • Lambrecht & Quenstedt, *Catalogus*, 1938: 24. • NDB: 1, 628-9 [by H. Ziegenspeck]. • Poggendorff: 1, col. 114. • Sarjeant, *Geologists*, 1980: 2, 506. • Thomas, *Dictionary of Biography*, 1884: 307. • WBI. • *World Who's Who in Science*: 128.

381. — German, 1785 [Collection catalog].

Verzeichniß | der | Gräfflich Reuß-Plauischen | Naturaliensammlung | zu Köstritz. | [ornament] | [rule] | Gera, | gedruckt bey Heinrich Gottlieb Rothen. | 1785.

2 parts. [Part 1] 8°:)(3, A-U8 X3 [no quire W]; 162 *l.*; [6], [1]-325, [1] p. [Part 2] 8°: [not seen].

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorbericht."; [1]-325, Text.

VERY RARE. Although this title was published anonymously, authorship is generally attributed to

BATSCH

Batsch. This is a catalog of Count Heinrich Reuss-Plauen XXVI's [1725-1796] natural history cabinet located at Köstritz (now in Thuringia, Germany) which was issued in 2 parts in 1785. The first part lists only shells and other marine animals. The preface unsigned preface by Batsch outlines the mineralogical portion that is contained in the second part together with descriptions of butterflies and other insects. It is arranged on a system founded on Wallerius and contains precious and semiprecious stones, marbles, jaspers, Labradorite, alabaster, petrified wood, etc. [Entry by Andreas Mueller]

REFERENCES: BL: [no copy listed]. • BMC: 6, 65. • Murray, Museums, 1904: 3, 125. • NUC: [no copy listed].

both vols. are numbered I-VII. PAGE SIZE: 192 x 110 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [1 pg], "Meinen Freunden Kämmerer und Wildenow gewindet."; [1 pg], Blank.; [4 pgs], "Vorerinnerung."; [1]-528, Text.; [At end], 5 folding plates.

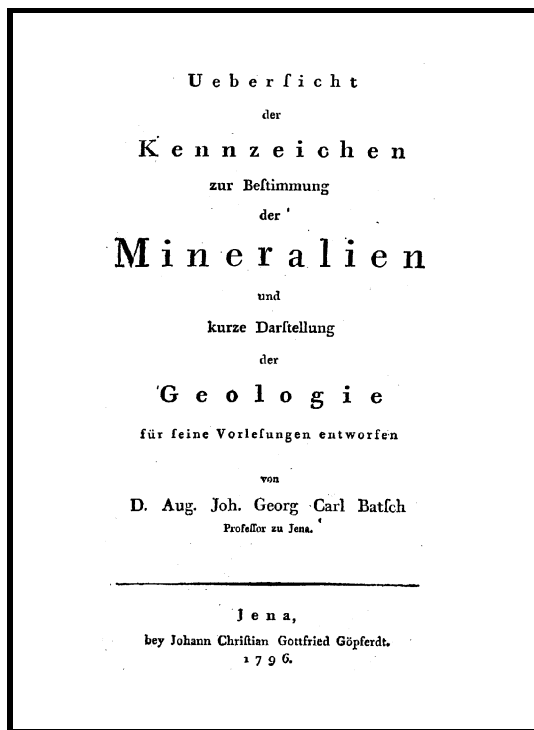
[Vol 2] [2 pgs], Title page, verso blank.; [529]-860, Text.; 661-681, "Erstes Register."; 682-690, "Zweytes Register."; [2 pgs], Errata.; [At end], 2 folding plates.

VERY SCARCE. This is the first part published of a proposed, never finished general natural history series. It provides introductions to animal science and mineralogy.

REFERENCES: BL: [956.h.20.]. • NUC: 39, 188-9 [NB 0184792].



VERSUCH, 1788



UEBERSICHT, 1796

382. — German, 1788-9.

Versuch | einer | Anleitung, zur Kenntniß und Geschichte | der | Thiere | und | Mineralien, | für akademische Vorlesungen entworfen, und mit | den nöthigsten Abbildungen versehen, | von | D. Aug. Joh. Georg Carl Batsch. | Erster [-Zweiter] Theil. | [rule] | Allgemeine Geschichte der Natur; besondre der Säug= | thiere, Vögel, Amphibien und Fische. | [rule] | Mit fünf Kupfertafeln. | [ornate rule] | Jena, | in der Akademischen Buchhandlung, 1788.

2 vols. [VOL 1: 1788] 8°:)(4 A-Z⁸ Aa-Kk⁸; 268ℓ.; [8], [1]-528 p., 5 folding plates (animals & birds); [VOL 2: 1789] 8°: π¹ Ll-Zz⁸ Aaa-Hhh⁸ I⁶ K⁸; 181ℓ.; [2], [529]-860, 661-690, [2] p., 2 folding plates. Plates throughout

383. — German, 1796.

Uebersicht | der | Kennzeichen | zur Bestimmung | der | Mineralien | und | kurze Darstellung | der | Geologie | für seine Vorlesungen entworfen | von | D. Aug. Joh. Georg Carl Batsch | Professor zu Jena. | [tapered rule] | Jena, | bey Johann Christian Gottfried Göpferdt. | 1796.

8°: *⁵ A-H⁴ I²; 67ℓ.; [10], [1]-116, [8] p. PAGE SIZE: 202 x 110 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Christian Wilhelm Büttner.; [1 pg], Blank.; [4 pgs], "Vorrede."; [2 pgs], "Inhalts-Anzeige."; [1]-116, Text.; [8 pgs], "Register."

VERY SCARCE. An introductory work in mineralogy and geology. The first section (pp. 1-

46) describes the characteristics of minerals, including specific gravity, optics, color, transparency, crystal forms, hardness, electricity, magnetism, etc. The second section covering geology (pp. 47-116) is based on the researches of JOHANN CARL WILHELM VOIGT.

REFERENCES: BL: [970.i.11.]. • LKG: IX 21. • NUC: [no copy listed].

384. — German, 1796.

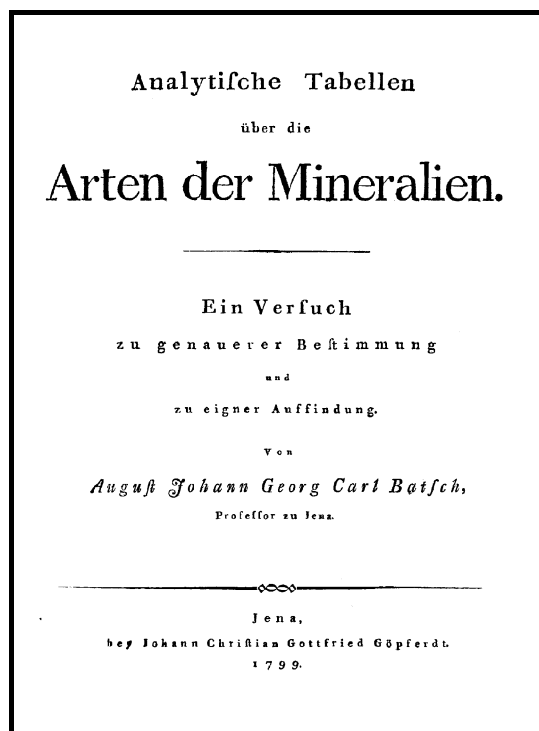
Versuch | einer | Mineralogie | für | Vorlesungen | und | für anfangende Sammler von Mineralien | entworfen | [tapered rule] | A.I.G.C. Batsch | Professor zu Iena. | [tapered rule] | Iena und Leipzig, bey Christian Ernst Gabler. | 1796.

8°: *8 A-Z⁸ Aa-Ee⁸ Ff⁴; 234ℓ.; [16], [1]-452 p. PAGE SIZE: 204 x 116 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Christian Gottlob Voigt.; [1 pg], Blank.; [4 pgs], "Vorerinnerung."—dated 4 October 1795.; [8 pgs], "Inhaltsanzeige."; [1]-436, Text.; [437]-452, "Register."

RARE. This is an explanation of the author's valuable mineralogical system, fully annotated, and including descriptions of the mineral species. Odd for the time, Batsch has included in many instances a chemical analysis of the mineral in question. The book is dedicated to JOHANN CARL WILHELM VOIGT, a close friend of the author.

REFERENCES: BL: [726.f.18.]. • BMC: 1, 110. • LKG: XII 122 & 123a. • NUC: [no copy listed].



ANALYTISCHE TABELLEN, 1799

385. — German, 1799.

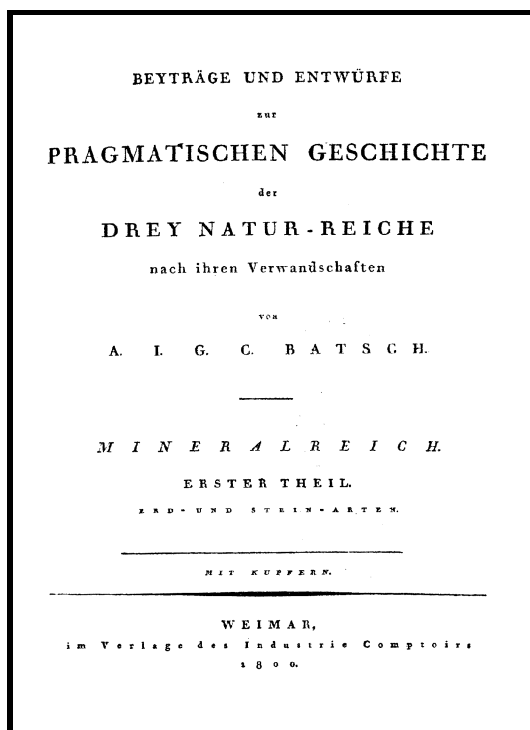
Analytische Tabellen | über die | Arten der Mineralien. | [tapered rule] | Ein Versuch | zu genauerer Bestimmung | und | zu eigner Auffindung. | Von | August Johann Georg Carl Batsch, | Professor zu Jena. | [ornate rule] | Jena, | bey Johann Christian Gottfried Göpferdt. | 1799.

4°: π⁶ A-R⁴; 74ℓ.; [i]-xii, [1]-131, [5] p., one plate (folding; blowpipes). PAGE SIZE: 232 x 200 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-xii, "Vorrede."; [1]-119, Text.; 120-131, "Anhang."; [4 pgs], "Register."; [1 pg], "Erklärung der Kupfertafel."

RARE. In these analytical tables, Batsch provides an exact determination of the species, so that they can be organized into his classification system. He provides instructions on how the determinations were made, particularly with reference to the blowpipe. The plate shows several types of blowpipes.

REFERENCES: BL: [no copy listed]. • LKG: XII 211 & 212a. • NUC: [no copy listed].



BEYTRÄGE UND ENTWÜRFE, 1800

386. — German, 1800.

Beyträge und Entwürfe | zur | Pragmatischen Geschichte | der | Drey Natur-Reiche | nach ihren Verwandtschaften | von | A.I.G.C. Batsch. | [rule] | Mineralreich. | Erster Theil. | Erd- Und Stein-Arten. | [rule] | Mit Kupfern. | [tapered rule] | Weimar, | im Verlage des Industrie Comptoirs | 1800.

BATTHYÁNI

4°: π^2 A-Z⁴ Aa⁴; 98 ℓ .; [4], [1]-192 p., 3 hand-colored plates (showing mineral specimens). PAGE SIZE: 246 x 200 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Bemerkung."; [1]-192, Text.; [At end], 3 hand-colored plates.

RARE. No more published.

REFERENCES: BL: [no copy listed]. • LKG: XII 124b. • NUC: 39, 188-9 [NB 0184768].

387. — German, 1802.

Taschenbuch für mineralogische Excursionen in die umliegende Gegend von Jena / entworfen von A[ugust] J[ohann] G[eorg] C[arl] Batsch, Professor zu Jena. Weimar, im Verlage des Industrie-Comptoirs, 1802.

8°: [18], 361 p. RARE.

CONTENTS: Natürliches System der Jenaischen Mineralien, nebst ihren Beschreibungen. – Künstliches System der Jenaischen Mineralien. – Einzelne Mineralkennzeichen, durch Beyspiele aus der Jenaischen Gegend erläutert. – Geologische Bemerkungen über die Jenaischen Mineralien. – Gebrauchsarten und Nachtheile der Jenaischen Mineralien. – Fund-Oerter Jenaischer Mineralien. – Namen-Register der Mineral-Arten.

REFERENCES: BL: [no copy listed]. • BMC: 1, 110. • NUC: [no copy listed].

388. — German, 1801.

Grundzüge | der | Naturgeschichte | des | Mineral=Reichs. | [tapered rule] | Ein Handbuch | für Lehrer auf Gymnasien, und für Naturfreunde zum | eignen Unterricht, | von | A.J.G.C. Batsch, | Professor zu Jena. | [tapered rule] | Erster Theil. | Allgemeine Geschichte der Mineralien | und | besondere der Erden und Steine. | [tapered rule] | Weimar, | im Verlage des Industrie=Comptoirs | 1801.

8°: xvi, vi, 112, viii p., 2 plates. PAGE SIZE: 202 x 116 mm.

VERY SCARCE. No more published. Part one is concerned with the kingdom of minerals. In 1805, this part was combined with the *Beiträge* and published as the first portion of a 3 part general natural history [see next entry].

REFERENCES: BL: [726.e.31.]. • BMC: 1, 110. • LKG: XII 213b. • NUC: [no copy listed].

389. — German, 1805.

Einleitung zum Studium der allgemeinen Naturgeschichte. Erste Abtheil: Mineralreich. Ein Handbuch für Lehrer auf Gymnasien und für Naturfreunde zum eigenen Unterrichte. Weimar, 1805.

2 parts. [Part 1] 8°: xvi, 112, viii, vi p., 2 plates; [Part 2] 8°: xvi, 412 p., one plate.

RARE. A bibliographical nightmare. The first part of this work appeared as: *Grundzüge der allgemeinen Naturgeschichte nach den drei Reichen; oder Handbuch für Lehrer der Naturgeschichte auf Gymnasien und Schulseminarien, sowie auch für Liebhaber zum Selbstunterrichte. Mineralreich.* Theil

I, abtheil, 8. Weimar, 1801. (8°: xvi, vi, 112, viii p., 2 plates). It was then added to the *Beiträge* and published in 1805.

Abt. 1. Mineralreich. [With Beiträge zu einer allgemeinen Einleitung in das Studium der Mineralogie als berichtigende Anmerkungen und Zusätze. 1. Zu des Hrn. Prof. Batsch Einleitung in das Studium der allgemeinen Naturgeschichte, erste Abtheilung Mineralreich. 2. Zu des Hrn. Prof. Haüy Traite de Mineralogie und der davon erschienenen Uebersetzung ... 3. Zu den bisherigen Lehrbüchern der Mineralogie, nach des Hrn. Bergrath Werner's System ... Von Carl Constantin Haberle.] 2 pt.

Abt. 2. Pflanzenreich. [With Berichtigende Anmerkungen und Zusätze zu des Herrn Professors A.J.G.C. Batsch Einleitung zum Studium der allgemeinen Naturgeschichte. Zweite Abtheilung. Pflanzenreich. Von Carl Constantin Haberle.] 2 pt.

Abt. 3. Thierreich. [With Berichtigende Anmerkungen und Zusätze zu des Herrn Professors A.J.G.C. Batsch Einleitung zum Studium der allgemeinen Naturgeschichte. Dritte Abtheilung. Thierreich. Von D. Ludw. Friedr. Froriep.] 2 pt.

Reissue, 1806: *Berichtigende Anmerkungen und Zusätze zu des Hrn. Prof. Batsch Einleitung zum Studium der Allgemeinen Naturgeschichte. Erste Abtheil. Mineralreich. Mit Hinsicht auf die Häüysche Krystallisationslehre und einer kritischen Beurtheilung der letztern von C.C. Haberle.* Mit 1 Kupfer. Weimar, Im Verlagen dem Landes- Industrie-Comptaire, 1806. 8°: [i]-xvi, [1]-412 p., one plate.

REFERENCES: (1805) BMC: 1, 110. • LKG: XII 214c. • NUC: [no copy listed]. • BL: • BL: [730.f.19.]. • (Grundzüge) NUC: [no copy listed]. • (Reissue, 1806) BMC: 1, 110. • LKG: XII 215d. • NUC: [no copy listed].

390. — German, 1802.

Grundzüge der Naturgeschichte des Mineral-Reichs. Ein Handbuch für Lehrer auf Gymnasien, und für Naturfreunde zum eignen Unterricht von A[ugust] J[ohann] G[eorg] C[arl] Batsch, Professor zu Jena. – Erster Theil. Erste-Zweyte Abtheilung. Allgemeine Geschichte der Mineralien und besondere der Erden und Steine. – Weimar, im Verlage des Industrie-Comptoirs, 1802.

2 parts. [Part I] 8°: [2], [i]-vi, [1]-112 p. [Part II] 8°: [2], [i]-viii, [1]-176 p. VERY SCARCE.

CONTENTS: [Part I] [2 pgs], Title page, verso blank.; [i]-vi, "Vorrede"—signed A.J.G.C. Batsch, with an addition by F.J. Bertuch.; [1]-27, "I. Grundstoffe/"; 28-36, "II. Natürliche Verbindungen der Grundstoffe."; 37-54, "III. Aeußere Erscheinungen bey Verbindung der Grundstoffe."; 55-70, "IV. Werkstätten der Natur zur Veränderung des Mineralreichs."; 71-92, "V. Erkennbarkeit und Bezeichnung der Mineralarten. Ihr System."; 93-112, "VI. Benutzung der Mineralien."

[Part 2] [2 pgs], Title page, verso blank.; [i]-viii, "Erklärung der Kupfer zum Mineral=Reiche."; [1]-158, "...I. Kohlensäure Kalkarten."; 159-176, "II. Schwefelsäure Kalkarten oder Gypse."

BATTHYÁNI, Vincenz von. Hungarian aristocrat.

Bathijani lived in Budapest and he formed one of the finest natural history collections in the region.

REFERENCES: LKG: 279. • Poggendorff: 1, col. 114.

391. — German, 1811.

Reise durch einen Theil Ungarns, Siebenbürgens, der Moldau und Buccovina im Jahr 1805 vom Grafen Vinzenz Batthyani. Pest, bei Conrad Adolph Hartleben, 1811.

8°: [2], [1]-236 p. Description of the authors trip through parts of present day Hungary and the Czech Republic. Included are observations on the mineralogy and geology of the region. RARE.

REFERENCES: BL: [10215.a.21.]. • LKG: XIV 862.

BAUER, Georg.

See: Agricola, Georgius.

BAUER, Max Hermann. (BORN: Gnadenthal, Germany, 13 September 1844; DIED: Marburg, Germany, 4 November 1917) *German mineralogist*.

Bauer was educated at the University of Tübingen, with post graduate work in mineralogy at University of Berlin. He was appointed lecturer in mineralogy and geology at Göttingen in 1871. He moved on to a professorship of mineralogy and geology at Königsberg, Germany in 1875, before being named professor of mineralogy and petrology at the University of Marburg in 1884. Bauer edited *Beiträge zur Mineralogie und Neues Jahrbuch für Mineralogie, Geologie und Paläontologie* from 1880 to 1891.

REFERENCES: Bach, S.R., "Pioneers in gemmology, no. 3, Max Hermann Bauer, 1844-1917," *Gemmologist*, 14 (1944), 7-9, portrait. • Barr, *Index to Biographical Fragments*, 1973: 17. • DBA: I 62, 115; 1423, 350. • NDB: 1, 642-3 [by W. Quenstedt]. • Poggendorff: 3, 81, 4, 75-6 & ??? • Sarjeant, *Geologists*, 1980: 2, 508. • *Science*, New Series: 41 (1915), 392-5. • WBI. • *World Who's Who in Science*: 129. • *Zentralblatt für Mineralogie*: Jg. 1917, 73-84.

392. — German, 1886 [First edition].

Lehrbuch | Der | Mineralogie | Von | Max Bauer. | Mit 588 Holzschnitten. | Berlin und Leipzig. | Verlag Von J. Guttentag | (D. Collin). | 1886.

8°: π^6 1-35⁸ 36²; 288 ℓ .; [i]-xi, [1], [1]-562, [2] p., 588 text figures. PAGE SIZE: 218 x 134 mm.

CONTENTS: [i-ii], Title page, verso "Zur Beachtung. | ..."; Dedication to Franz Ernst Neumann.; [iv], Blank.; [v]-viii, "Vorrede."—signed Max Bauer, 1886.; [ix]-xi, "Inhaltsübersicht.;" [1 pg], Blank.; [1]-533, Text.; [534]-538, "Register zum allgemeinen Theil.;" [539]-562, "Mineraverzeichniss zum speciellen Theil.;" [1 pg], "Druckfehlerverzeichniss.;" [1 pg], Blank.

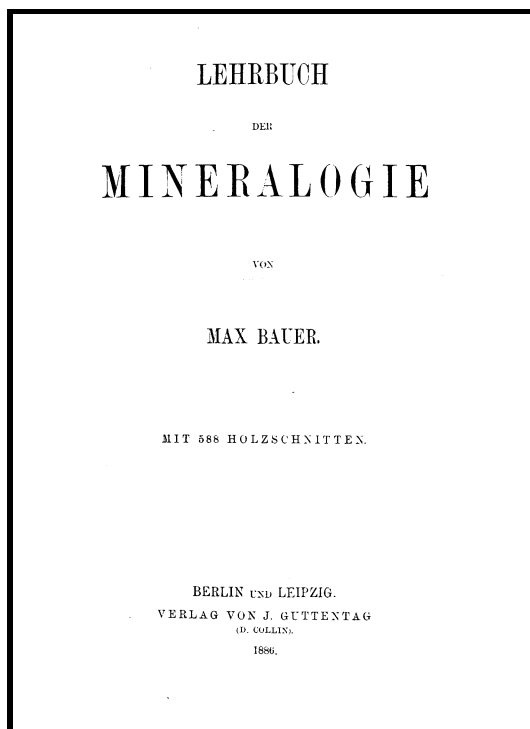
SCARCE. This well written and heavily illustrated mineralogical textbook is divided into two sections, general and special. Reviewed within the first portion are standard topics such as definitions and terminology, crystallography, mineral properties, and mineral chemistry. The later part provides a good descriptive mineralogy.

REFERENCES: BMC: 1, 112. • Dana's 7th (Bibliography): 66. • NUC: 39, 577-8 [NB 0193879].

393. 2nd edition, 1904: Lehrbuch | Der | Mineralogie | Von | Max Bauer. | Zweite, | Völlig Neubearbeitete Auflage. | Mit 670 Figuren. | [ornament] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung (E. Nägele). | 1904.

8°: π^6 1-57⁸ 58⁶; 468 ℓ .; [i]-xii, [1]-924 p., 670 figures. PAGE SIZE: 240 x 156 mm.

CONTENTS: [i-ii], Title page, verso "Zur Beachtung.;" [iii]-vi, "Vorrede zur ersten Auflage.;" [vii], "Vorrede zur



LEHRBUCH DER MINERALOGIE, 1886

zweiten Auflage."—dated Autumn 1903.; [viii], Blank.; [ix]-xii, "Inhaltsübersicht.;" [1]-882, Text.; [883]-893, "Register zum allgemeinen Teil.;" [894]-924, "Mineralverzeichnis zum speziellen Teil."

SCARCE. This enhanced edition carries forward the same format as the first edition, with considerable additional material.

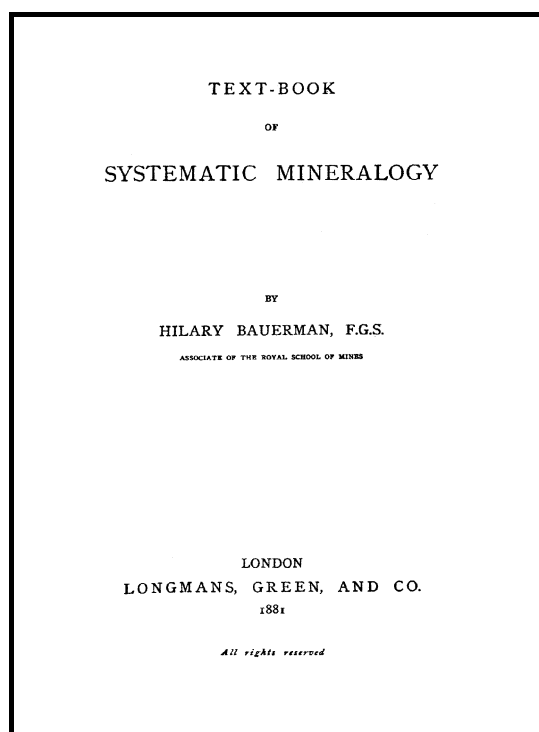
REFERENCES: BMC: 6, 65. • Dana's 7th (Bibliography): 66. • NUC: 39, 577-8 [NB 0193880].

BAUERMAN, Hilary. (BORN: London, England, 16 March 1833; DIED: 5 December 1909) *English metallurgist & mineralogist*.

Bauerman was educated at the Government School of Mines, graduating in 1851. He then had further training at the Freiberg Bergakademie. In 1855, he was appointed assistant geologist of the Geological Survey of United Kingdom. He was the chief geologist of the North American Boundry Commission, Canada in 1858. Bauerman was elected a Fellow of the Geological Society of London.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 17. • BBA: I 79, 420-421; II 1289, 2. • Cleavelly, *World Palaeontological Collections*, 1983: 50. • *Geological Magazine*: 7 (1910), 46-8. • *Mineralogical Magazine*: 15 (1909), 443-4. • *Mining Journal*: 37 (1909), 462-8. • *Nature*: 82 (1909), 195-6. • *Proceedings of the Geological Society, London*: 1910, 1-ii. • *Quarterly Journal of Geological Society of London*: 66 (1910), 1. • Sarjeant, *Geologists*, 1980: 2, 508. • *Science*: 30 (1909), 914. • Stanley, G.F.G., *Mapping the Frontier. Charles Wilson's diary of the survey of the 49th parallel, 1858-1862, while Secretary of the British Boundary Commission*. Edited and with an introduction by George F.G. Stanley. Toronto, Macmillan of Canada, 1970. [10], 182 p., frontispiece (portrait), 3 maps. • WBI. • *World Who's Who in Science*: 130.

394. — English, 1881 [First edition].



TEXT-BOOK, 1881

Text-Book | Of | Systematic Mineralogy | By | Hilary Bauerman, F.G.S. | Associate of the Royal School of Mines | London | Longmans, Green, and Co. | 1881 | All rights reserved.

8°: π^4 B-Z⁸ Aa⁸; 188 ℓ .; [i]-vi, [2], [1]-367, [1] p., text illus. PAGE SIZE: 170 x 110 mm.

CONTENTS: [i-ii], Half title page, verso blank (missing from copies examined).; [iii-iv], Title page, verso blank.; [v]-vi, "Preface."—dated 10 January 1881.; [1 pg], "Contents."; [1 pg], Blank.; [1]-362, Text.; [363]-367, "Index."; [1 pg], Blank.

SCARCE. One from the series of the *Text-Books of Science*. The author designed the text around two principles. First that it should be a useful guide to students wishing to acquire a flavor of the subject and second, to serve as an elementary introduction to more comprehensive textbooks on the subject, such as Dana, Des Cloizeaux, and Miller. Bauerman has been guided by Groth's *Physikalische Krystallographie* (Leipzig, 1876) and Rammelsberg's *Handbuch der Mineralchemie* (Leipzig, 1875) in his descriptions, while utilizing the crystallographic notation of Miller.

REFERENCES: BMC: 1, 112. • Dana's 7th (Bibliography): 66. • NUC: 39, 613-4 [NB 0194783].

395. 2nd edition, 1884: Text-Book | Of | Descriptive Mineralogy | By | Hilary Bauerman, F.G.S. | Associate Of The Royal School Of Mines | London | Longmans, Green, And Co. | 1884 | All rights reserved.

8°: [i]-vi, [2], [1]-399, [1] p., text illus. PAGE SIZE: 170 x 112 mm.

CONTENTS: [i-ii], Half title page, "Text-Books Of Science | Adapted For The Use Of | Artistians And

Students In Public And Science Schools | [rule] | Descriptive Mineralogy," verso "Text-Books of Science."; [iii-iv], Title page, verso blank.; [v]-vi, "Preface."—dated 30 April 1884.; [1 pg], "Contents."; [1 pg], Blank.; [1]-393, Text.; [394], Blank.; [395]-399, "Index."; [1 pg], Blank.

SCARCE. In the preface, Bauerman describes the growing difficulty in condensing the growing amount of information about mineralogy into such a limited book. Therefore, he has included data on only the more important mineralogical species. For the purposes of illustration, the original wood blocks from 'Brooke and Miller' were used (i.e., Phillips, *Mineralogy*, London, 1852).

1892, third edition: New York, 1892. 8°: [i]-vi, [2], [1]-367 p., illus.

Reissue, 1902: Text-Book | Of | Descriptive Mineralogy | By | Hilary Bauerman, F.G.S. | Associate Of The Royal School Of Mines | New Impression | Longmans, Green, And Co. | 39 Paternoster Row, London | New York and Bombay | 1902 | All rights reserved. 8°: [i]-vi, [2], [1]-399, [1] p., text illus. Contents identical to the 1884 edition.

REFERENCES: (1884) BMC: 1, 112. • Dana's 7th (Bibliography): 66. • NUC: 39, 613-4 [NB 0194780]. • (1892) NUC: 39, 613-4 [NB 0194785]. • (Reissue, 1902) NUC: 39, 613-4 [NB 0194781].

396. — English, 1865.

A Descriptive Catalogue of the Geological, Mining, and Metallurgical Models in the Museum of Practical Geology. London, 1865.

8°: viii, 199, [1] p. VERY SCARCE.

REFERENCES: BMC: 1, 112.

A Descriptive Catalogue of the Rock Specimens in the Museum of Practical Geology. By A.C. Ramsay ... H.W. Bristow ... A. Geike ... and H. Bauerman ... (London, 1858, and other editions).

See: Ramsay, Alexander.



GASPARD BAUHIN

BAUHIN, Gaspard. (BORN: Basel, Switzerland, 17 January 1560; DIED: Basel, Switzerland, 5 December 1624) *Swiss botanist & anatomist.*

Bauhinus was educated at Padua, Italy and the University of Montpellier, France; returned to Basel, 1580; recieved M.D., Basel, 1581; appointed professor of Greek, University of Basel, 1582; professor of anatomy and botany, 1588 and practical medicine, 1614; eponym (with brother Jean) for plant genus, "Bauhinia"; first to classify plants by divisions of genus and species; collected plants in Italy, Germany and France, describing many new species.

REFERENCES: *Catalogue of Portraits of Naturalists*: 159 [15 portraits listed]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 83. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 382-83. • *ISIS*, 1913-65: 118 [see Gaspard Bauhin.]. • *ISIS*, 1966-75: 34. • Thomas, *Dictionary of Biography*, 1884: 310. • *World Who's Who in Science*: 130.

397. — Latin, 1613 [First edition].

Caspari | Bauhini | Basil. D. | Eiusdemq. Academ. | Anatom. et Botanic. | Professor. Ordin. | De | Lapidis Bezaar | Orient. et Occident. | Cervini item et | Germanici | Ortū, Natūra, dif- | ferentijs, veroque vsu | ex | Veterum & Recentiorum placitis | Liber | hactenus non editus. | [ornament] | Basileæ | Apud Conr. Waldkirch. | [rule] | Anno M DC XIII.
8°:)(8 :)4 A-S8 T4; 160ℓ.; [24], [1]-288, [8] p., 4 plates, ornamental initials and headpieces.

VERY RARE. This is an early treatise describing the bezoar of mystical and medical properties of calculi formed in the kidneys and guts of various animals. Such stones and similar animal calculi were the subject of intense interest from Classical times due to their supposed property as an antidote to poison or as an ingredient in various medical preparations. Bauhinus' treatise is one of the earliest to treat the subject and it is replete with mystical suppositions and historical notes. Its 46 chapters provide descriptions and discussions of the various specimen types as well as methods for determining real stones from imitations. Throughout the author has included considerable historical information, especially in reference to these stones used as medical remedies and antidotes.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 212. • DSB: 1, 522-5. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 83. • Gatterer, *Mineralogischen Literatur*, 1798-9: [no copy listed]. • Hoover Collection: no. 102. • Roller & Goodman, *Catalogue*, 1976: 1, 88. • Sinkankas, *Gemology Bibliography*, 1993: no. 477. • Thorndike, L., "De lapidibus," *Ambix*, 8 (1960), 6-23. [Historical review of Aristotele's 'De Lapidibus' from beginnings through the Renaissance.]: 7, 242-7 & 8, 61-3. • VD17: 14:009611T. • Wellcome Catalog (Books): 1, no. 731.

398. 2nd edition, 1625: Caspari | Bavhini Basileens, | Archiatri | & Praxeos Profess. | Ordin. | De | Lapidis Bezaaris | Oriental. & Occident. | Cervin. & Germanici | Ortū, natura, differentiis | veroque usu | Ex | Veterum & recentiorum placitis | Liber | priore editione auctior. | [ornament] | Basileæ | Sumptibus Lvdoici Regis | [rule] | Anno cId. Id. cxxv.

8°:)(8 2)(4 A-T8; 164ℓ.; [24], [1]-294, [10] p., title vignette, ornamental initials and headpieces.

RARE. This second edition contains additional text and increases the number of chapters to 51.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 212. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 83n. • Gatterer, *Mineralogischen Literatur*, 1798-9: [no copy listed]. • Hoover Collection: no. 103. • Roller & Goodman, *Catalogue*, 1976: 1, 88. • Sinkankas, *Gemology Bibliography*, 1993: no. 478. • VD17: 23:294227L. • Ward & Carozzi, *Geology Emerging*, 1984: no. 144. • Wellcome Catalog (Books): 1, no. 732.

BAUHIN, Joannes. (BORN: Basel, Switzerland [or Lyons, France], 12 February 1541; DIED: Mumpelgard [Montbéliard], France, 26 August 1613) *French botanist*.

CASPARI
BAVHINI BASILEENS.
ARCHIATRI
&
PRAXEOS PROFESS.
ORDINAR.
DE
LAPIDIS BEZAARIS
ORIENTAL. & OCCIDENT.
CERVIN. & GERMANICI
Ortu natura differentiis
veroque usu
EX
Veterum & recentiorum placitis
LIBER
priore editione auctior.



BASILEÆ
Sumptibus LVDOVICI REGIS
ANNO cId. Id. cxxv.

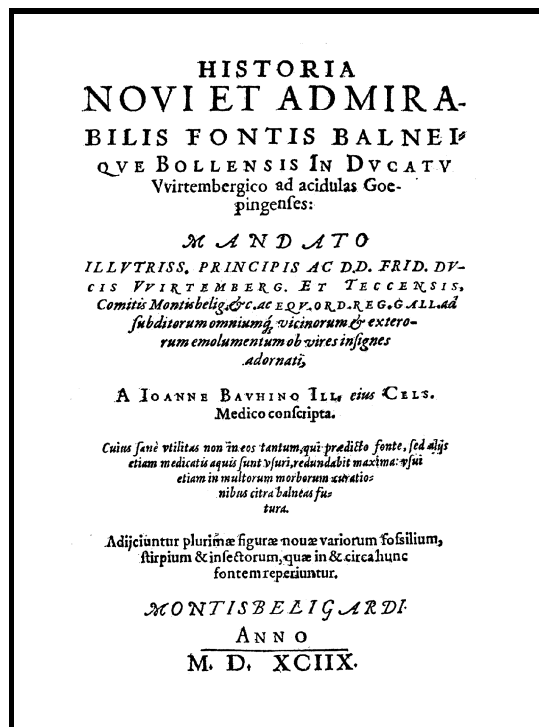
DE LAPIDIS BEZAARIS ORIENTAL, 1625



JOANNES BAUHIN

Of French Protestant ancestry, Bauhin was born to parents exiled in Basel, Switzerland. He was educated in Basel under the exiled Italian religious reformer Coelius Curione [1503-1569] and in Zurich under the famous Swiss naturalist CONRAD GESNER. From 1560 to 1563, after completing his studies, Bauhin made an extensive trip throughout Europe, afterward settling in Lyons, France, where he established a medical practice. In 1568, he was forced to flee back to Switzerland when a wave of religious persecution swept France, but in 1571 he was appointed physician Duke Frederick, ruler of Württemberg and Montbéliard. He built extensive botanical gardens, and collected minerals in the Alps with Gesner and others.

REFERENCES: ADB. • *Catalogue of Portraits of Naturalists*: 159-60 [4 portraits listed]. • DBA: I 62, 305-306. • DBF: 1, 331. • DSB: 1, 525-7 [by C. Webster]. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • LKG: 279. • *Nouvelle Biographie Générale* (Hoefler). • NDB: 1, 649-50 [by H. Buess]. • Thomas, *Dictionary of Biography*, 1884: 310-1. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 35-6 & 159-60.



HISTORIA NOVI, 1598.

399. — Latin, 1598 [First edition].

Historia | Novi Et Admir- | bilis Fontis Balnei= | qve Bollensis In Dvcatv | Vvirtembergico ad acidulas Goe- | pingenses: | Mandato | Illvtriss. Principis Ac D.D. Frid. Dv- | cis Vvirtemberg. Et Teccensis, | Comitis Montisbelig & c. Ec Eqv. Ord. Reg. Gall. ad | subsidiorum omniumq. vicinorum & extero- | rum emolumentum ob vires insignes | adornati, | A Ioanne Bavhino Ill. eius Cels. | Medico conscripta. | Cuius sanè utilitas non in eos tantum, qui prædicto fonte, sed alys | etiam medicatis aquis sunt vsuri, redundabit maxima: vsui | etiam in multorum morborum curatio= | nibus citra balneas fu= | tura. | Adijciuntur plurimæ figuræ nouæ variorum fossilium, | stirpium & infectorum, quæ in & circa hunc fontem reperiuntur. | Montisbeligardi | Anno | [rule] | M. D. XCIX.

[TITLE PAGE OF THE FOURTH BOOK READS:]

Historiae | Fontis Et Bal- | nei Admirabilis | Bollensis | Liber Quartvs. | De Lapidibvs Metalicis Qve | Miro Natvrae Artificio In Ipsis | terræ visceribus figuratis, nec non de stirpibus, infectis, auibus, aliisq. animalibus, partim in putei penetralibus, dum eius ve- | nas aquileges fodiendo perscrutantur, parit in vicinia in- | uentis & obseruatis, quorum multa nunquam visa | viuus iconibus expressa hic oculis | subiiciuntur. | Avctore | Ioh. Bavhino Illustrissimi Ducis Vvir= | tembergici, & c. Medico. | [ornament] | Montisbelgardi. | Apud Iacobvm Foilletvm. | CIO IO XCVIII.

[Part 1] 4°: $\pi^1 A^3$ (:) $a-z^4 Aa-Nn^4 Oo^2$; 154 ℓ .; [16], [1]-291, [1] p.; [Part 2] 4°: $a-z^4 Aa-Ff^4$ ★ (:) (:) 4 [(:)(:)/4 blank]; 124 ℓ .; [8], 1-222, [2] blanks, [6], [2] blanks, [6], [2] blanks p., large portrait of J. Bauhin on verso of title, hundreds of woodcut illustrations. Text has initial letters and printer's devices throughout. PAGE SIZE: 196 x 156 mm.

CONTENTS: [Part 1] [2 pgs], Title page, verso usually blank but very rarely a portrait of Bauhin.; [7 pgs], "Illvstriss. Prin- | cipibvs Ioanni Fri= | derico, Ac Lvdovico Frideri= | co, Illvstriss. Princip. Friderici Ducis Vvirtem- | berg. & Teccensis, Comitis Montisbelig. ac | Equitis Ordinis Regis Galliarum, & c. | ..."—signed Ioh. Bauhinus, February 1598.; [1 pg], "Mand atvm | Illvstriss. C. Wir- | temberg. & c. | ..."—dated July 1596.; [5 pgs], "Leges Balnei Admirabilis Bol= | lensis, quas sancit Fridericus D.G. Dux | ..." [1 pg], "Avthores Qvi in Historia Fontis | Admirabilis citantur.;" [1]-87, "Liber Primvs | ..." 88-177, "... Libri Secvndi, ..." 178-291, "... Liber Tertivs ..." [1 pg], Blank.

[Part 2] [2 pgs], Title page, verso "Viris | clariss. Celeberr. | ..." [5 pgs], Text.; [1 pg], Blank.; 1-222, Text, beginning "De Lapidibvs Variis, Tam | Bitvminosis Qvam Aliis, Cornv | Ammonis, Conchite, Ctenite, Myite, alijsq; | figuratis, Astroïte, Belmnite. | ..." [2 pgs], Blanks.; [6 pgs], "Paralipomena." [=mushrooms & fungi]; [2 pgs], Blanks.; [6 pgs], "Encomiwm | Fontis Bollensis | ..." [=commendatory verses]; [2 pgs], Blanks.

VERY RARE. *Historia Novi et Admirabilis* comprises four books, of which the first three provide a description of the medicinal virtues of European mineral waters and baths, based on the study of the springs at Bad Boll, near Gropingen, Württemberg. It is one of the first illustrated books on minerals, gems and also contains an early record of cultivated fruit with a series of early illustrations. This was also the most detailed work on the subject of balneology written in the sixteenth century, and it became Bauhin's most popular treatise. The fourth book, written almost like an appendix, is much more unusual in covering the local natural history in considerable detail. It utilizes fine woodcuts to illustrate the descriptions, and these comprise 210 of fossils and minerals, 60 of apples, 41 of pears, 2 of plants and 16 of insects, making this one of the very few illustrated works concerning mineralogy printed in the sixteenth century. After the main part of text, there follows a *Paralipomena*, with 11 woodcuts, including 7 of fungi, and 2 which perhaps show the preparation of flax. Finally, the text includes 3 leaves

of commendatory verses. In the first part, Bauhin has included a list of authorities that are cited in the text. Among these are several works authored by CONRAD GESNER, whose mineralogical work perhaps inspired Bauhin to prepare this exceptional illustrated mineralogy.

Unknown to most bibliographers is that there are several issues of the first edition. The presumed first issue was published with a portrait of Bauhin printed on the verso of the title page. This beautiful renaissance portrait shows the author with a plant in his right hand and his left hand on a skull. The portrait has the dates 1541 and 1597, the first date being the date of birth and the other one the date of the portrait. However, this issue does not contain the six-page illustrated supplement on fungi, "Paralipomena." Another issue lacks the portrait but does contain the supplement. A third issue contains the portrait and the supplement, but to date the compiler has only encountered this in one copy.

REFERENCES: BL: [1171.i.1.(2.)]. • BMC: 1, 113. • Cobres, *Deliciae Cobresianae*, 1782: 1, 246-7. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 72-3. • Janson, H.F., *Pomona's Harvest: An Illustrated Chronicle of Antiquarian Fruit Literature*. Portland, Timber Press, 1996: p. 82. • LKG: XIV 312a. • Nissen (ZBI): no. 100. • NLM 16th Century Books (Durling): no. 495. • NUC: 39, 648-9 [NB 0195579-81]. • Pritzel, *Thesaurus Literaturae Botanicae*, 1871-3: no. 500 [not seen]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 142. • Wellcome Catalog (Books): 763.

400. Reissue, 1600: De lapidibus, metallis et miro naturae artificio in ipsis terrae visceribus figuratis: necnon de stirpibus, insectis, avibus, aliisque animalibus, partim in fontis admirabilis Bollensis penetralibus, dum eius venas aquileas fodiendo perscrutabantur: partim in vicinia inuentis c. Medico. Montisbeligardi, Impensis Ludouici Koenig, apud Iacobum Foilletum, 1600.

4°: [8], 222, [2] blanks, [6], [2] blanks, [20] p., many woodcuts in the text.

RARE. This is the second printing of the very interesting description of stones, fossils, fruits, plants, insects, etc. found in the area of Bad Boll. The first edition was published as the fourth part of Bauhin's *Historia Novi et Admirabilis Fontis Balneique Bollensis* (1598). The unnumbered leaves between the blanks at the end contain some additional matter where among others mushrooms are figured. In the first edition were also included in this place three unnumbered leaves of poems, which are not present here; it is not clear whether they were included in this edition or not.

401. 2nd edition, 1607-8: De aquis medicatis noua methodus Ioan. Bauhini ... Libris quatuor comprehensa. Agitur in iis de fontibus celebribus, thermis, balneis uniuersa Europae, & potissimum ducatus Wirtembergici, eorum mixtionibus, metallis, succis inuestigandi, vtendi modo, ac eorum viribus. Item de varijs fossilibus stirpibus & insectis, quorum plurimae siue icones & regionum tabulae adduntur. Montisbeligardi, Apud Iacobum Foillet, 1607-8.

4°:) (4 (:4 (: (:3 a-z4 Aa-Nn4 Oo2 2a-2z4 2Aa-2Ee4 2Ff3 *3 G-H4 I2; 278ℓ.; [22], 291, [8], 222, [24] p., illus., folding plates, portrait, title vignettes, book 4 has a special title page, dated 1608, ornamental initials and head- and tailpieces. RARE.

REFERENCES: Hoover Collection: no. 101. • Sallander, *Bibliotheca Walleriana*, 1955: nos. 786-7.

402. 3rd edition, 1612: De aquis medicatis noua Methodus ... agitur de Fontibus celebribus, Thermis, Balaeis, uniuersae Europae et potissimum Ducatus Wirtembergici. Eorumque

miationibus, Metallis, succis inuestigandi, utendi modo ac eorum viribus. Item de varijs fossilibus stirpibus et insectis. Montbéliard, Iacobus Foillet, 1612.

4°: [24], 291, [34] last blank, 222 p., 4 folding maps of Württemberg, numerous woodcuts. RARE.

REFERENCES: BL: [461.a.24.]. • LKG: XIV 311. • NUC: 39, 648-9 [NB 0195572].

German edition

403. German transl., 1602: Ein new Badbuch, vnd historische Beschreibung, von der wunderbaren Krafft vnd Würckung, des Wunder-Brunnen vnd heilsamen Bads zu Boll, nicht weit vom Sawrbrunnen zu Göppingen, im Hertzogthumb Württemberg ... zu d. Underthanen u. Benachbarten, auch anderer außenländischen Völcker unnd Nationen Nutzen, von wegen seiner außbündigen Krafft u. Tugendt, erbawen u. zugerichtet durch Johannem Bauhinum ... erstlich lateinisch beschrieben, an jetzo aber ins Deutsch gebracht, durch David Förter... Stutgarten, Fürster, 1602.

4 vols. in one. [VOL 1] 4°: [16], 198 p. Title page in red and black. [VOL 2] 4°: [2], 207 [i.e. 205] p. [VOL 3] 4°: 270 p. [VOL 4] 4°: [2], 242 (i.e., 240), [8] p., 6 folding woodcut plates.

RARE. Translated by David Förter from *Historia Novi et Admirabilis Fontis* (Montisbeligardi, 1598).

REFERENCES: BMC: 1, 113. • Roller & Goodman, *Catalogue*, 1976: 1, 88. • VD17: 12:191795C.

BAUMEISTER, Joseph Anton Ignaz Edler von. (BORN: Vienna, Austria, 20 November 1750; DIED: Vienna, Austria, 6 October 1819) *Austrian author & publisher.*

Baumeister was the son of a civil official and studied at the University of Vienna. In 1770, he published a dissertation concerning the history of the Steiermark state. In 1792, he was entrusted by Kaiser Franz II with the education of his sons, the Princes Ludwig and Rudolf. In recognition of this service, he was awarded with a position of advisor to the government. In his retirement, Baumeister worked on a chronology of world history.

REFERENCES: DBA: I 64, 10-15. • DBF: 1, 340. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834: 1, 170 & 22, 138. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

404. — German, 1791.

Die | Welt in Bildern | vorzüglich | zum Vergnügen und Unterricht der Jugend. | [rule] | Herausgegeben | von | Joseph Edlem von Baumeister. | [rule] | Vierter Band. | [vignette] | (Mit 24 Kupfertafeln.) | [rule] | Wien | gedruckt und verlegt in der k.k. priv. von Baumeisterischen Buchdruckeren. | 1791.

2°: π² A-L² N² M¹ 2N¹ O-X¹ Y²; 40ℓ.; [4], 1-74, [2] p., 24 plates, title vignette. PAGE SIZE: 264 x 190 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "An den Leser."—dated 18 August 1790.; 1-74, Text.; [2 pgs], "Inhalt."

PLATES: The illustrations are incorporated into the pagination of this work, and consist of engravings of usually 4 to 6 items of mineralogical interest. Each is numbered with an "N." followed by the plate number. Plates 2-3, 5-7, 9, 11-12 and 15-22 are signed in a fashion similar to "J. Sollander px. Mansfeld sc," while all other plates are unsigned. Plate descriptions are handled within the text of the work.

The plates show: N. 1 (page 1). 4 figures showing 2 medallions and 2 marble samples. N. 2 (page 5). 4 figures showing 2 marble slabs and 2 calcite crystal groups. N. 3 (page 9). 4 figures showing 1 selenite crystal group, 2



DIE WELT IN BILDERN, 1791

dendritic growths and 1 fluorite crystal group. N. 4 (page 13). 4 figures showing 1 quartz crystal group, 1 flint, 1 chalcedony and 1 cinnabar. N. 5 (page 17). 4 figures of agates. N. 6 (page 21). 7 figures showing ruby, sapphire, topaz, tourmaline, emerald and chrysolite. N. 7 (page 25). 4 figures showing amethyst, garnet and beryl. N. 8 (page 29). 5 figures of jasper (cabs). N. 9 (page 33). 4 figures of flint. N. 10 (page 37). 5 figures of feldspar (cabs). N. 11 (page 41). 6 figures showing various salt groups. N. 12 (page 45). 6 figures showing amber, coal and sulfur. N. 13 (page 49). 4 figures of gold and metallic ores. N. 14 (page 53). 4 figures of silver specimens. N. 15 (page 55). 4 figures of copper minerals, malachite and chalcocite. N. 16 (page 57). 4 figures of iron specimens. N. 17 (page 59). 4 figures of iron and magnetite specimens. N. 18 (page 61). 5 figures of lead, galena, mimetite and cerussite. N. 19 (page 63). 5 figures of bismuth, sphalerite and ores of zinc. N. 20 (page 65). 4 figures of antimony and cobalt minerals. N. 21 (page 67). 4 figures of nickel and arsenic minerals. N. 22 (page 69). 5 figures showing pyrolusite, scheelite and cerussite. N. 23 (page 71). 4 figures showing mercury and cinnabar specimens. N. 24 (page 74). 1 figure showing platinum nuggets in a pan.

VERY SCARCE. The volume described was published as the fourth number of *Die Welt in Bildern* (6 vols., Vienna, 1788-92), which was directed towards juveniles. The set's focus was to show the young reader a comprehensive view of the world through realistic pictures. This part treats things dug from the earth by marvelously illustrating a wide variety of minerals, agates and marble samples. Johann Sollander [see note below] prepared the master plates from actual specimens, and his effort shows in this truly beautiful illustrated mineralogy.

The work exists in two states. One with the title vignette and plates untinted, and the other with these illustrations deliciously hand-colored. The colored copies are printed on a better quality paper that makes the volume noticeably thicker, and at the time of their production undoubtedly more expensive. One could suspect that authentic colored volumes are rarer than their uncolored counterparts.

Johann Sollander. *Austrian painter.* No direct information found; however, this may refer to Johann Sollerer (Sollener) [1747-1809], Viennese painter of miniatures.

Mansfeld. *Austrian engraver.* Refers to a family of Viennese copper engravers. Active during the period were Johann Georg [1764-1817], Johann [1770-1825] and Johann Ernst [1739-1796].

REFERENCES: BL: [728.i.20.]. • GV (1700-1910): 9, 193. • NUC: [no copy listed]. (Sollander) Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 31, 254. (Mansfeld) Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 24, 33.

BAUMER, Johann Wilhelm Christian. (BORN: Rehweiler, France, 10 September 1719; DIED: Giessen, Germany, 4 August 1788) *German physician, chemist & mineralogist.*

In 1748, Baumer was named professor of medicine at the University of Erfurt. In 1754, he was appointed professor of physics. Then he accepted in 1765 an appointment as professor of medicine at the University of Giessen as well as city physician.

REFERENCES: ADB. • DBA: I 64, 52-70. • Fischer, *Biographisches Lexikon der Ärzte*, 1932-3: 1, 75-6. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 385-86. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Lambrecht & Quenstedt, *Catalogus*, 1938: 25. • LKG: 279. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, cols. 116-7. • Thomas, *Dictionary of Biography*, 1884: 311. • WBI.

405. Dissertation, 1759: Dissertatio Philosophica | [rule] | De | Mineralogia | Territorii Erfvrtensis, | [rule] | Qvam, | Svb Avspiciis Divinis, | Consentiente Amplissimo Senatv | Philosophico, | Pvblicae Ervditorvm Disqvistiioni Svbmittit, | [...7 more lines...] | Praeses, | Io. Wilhelmvs Bavmer, | [...5 lines of titles and memberships...] | Respondente | Iacobo Henrico Rittermann, | [...3 lines of titles and memberships...] | | Di V. Martii M DCC LVIII. | In Avditorio Collegii Mai. Philos. Hor. Consuetis. | [double rule] | Erfvrti, Typis Heringianis, acad. Typogr.

4^o: [1]-40 p.

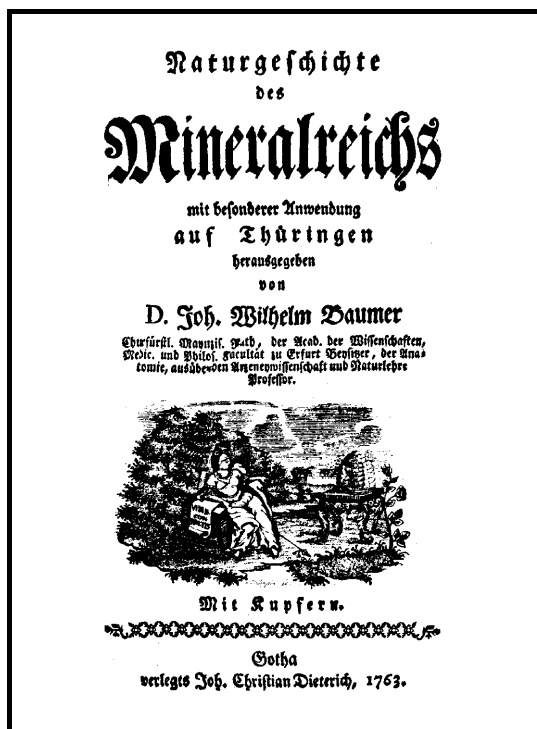
RARE. Dissertation — University of Erfurt (Jacob Heinrich Rittermann, respondent). Describes the minerals found in the vicinity of Erfurt, Germany.

REFERENCES: BL: [B.371.(5.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 91-2. • *Göttingische gelehrte Anzeigen*: 1751, p. 471. • NUC: [no copy listed].

406. — German, 1763-4.

Naturgeschichte | des | Mineralreichs | mit besonderer Anwendung | auf Thüringen | herausgegeben | von | D. Joh. Wilhelm Baumer | [...4 lines of achievements...] | [vignette] | Mit Kupfern. | [ornate rule] | Gotha | verlegt Joh. Christian Dieterich, 1763.

2 parts in one volume. [Vol 1: 1763] 4^o: a⁴ A-Kk⁸ Ll³; 272ℓ.; [8], [1]-520, [14] p., 11 folding plates (minerals and mostly fossils). Title vignette. [Vol 2: 1764] 4^o: π¹ a-t⁸ u⁷ x⁴; 164ℓ.; [2], [1]-318, [8] p., 9



NATURGESCHICHTE DES MINERALREICHS, 1763

folding plates (minerals and mostly fossils). PAGE SIZE: 168 x 98 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [6 pgs], Dedication, signed Joh. Wilh. Baumer, 3 October 1763.; [1]-520, Text.; [14 pgs], "Register."

[Vol 2] [2 pgs], Title page, verso blank.; [1]-16, "Vorbericht."; [17]-318, Text.; [8 pgs], "Register."; [At end], 9 folding plates.

VERY SCARCE, especially the second volume. In this attempt at a new form of systematic mineralogy, Baumer has arranged his system along a unique system. His arrangement includes burnable bodies, water, salts, earths, stones and ore and metals. He includes descriptions of accidental or jovial forms of stones and petrifications, metals and ores, and mountains of large masses. Although Baumer has compiled many oddities in his choices, citations are diligently recorded to other literature for each mineral species listed. The mineral descriptions are particularly good for the minerals found in the vicinity of Thüring, Germany. The second volume includes additions, corrections and reinterpretations to the first, arranged in the same way.

REFERENCES: *Alt. gel. Merc.*: 283. • Beekman, *Systematische Mineralogie*, 1906: p. 91. • *Berlinische Sammlungen*: 3, 330-1. • *Berliner Magazin*: 1 (1763), 240-3. • BL: [990.b.16.]. • BMC: 1, 113. • Cobres, *Deliciae Cobresianae*, 1782: 2, 600. • *Commentarii Lipsiae*: 14, 408. • *Erlanger gelehrte Beyträge*: 185. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 27. • *Greifsw. gel. Urth*: 286 & 292. • *Hamb. Nachr. aus dem Reich der Gelehrs*: 721-26. • *Hamburg. wöchentl. gelehrte Nach.*: 1764, no. 25. • LKG: XII 61. • NUC: 40, 66-7 [NB 0198681]. • Sinkankas, *Gemology Bibliography*, 1993: no. 481-2.

407. — Latin, 1771.

Historia Natvralis | Lapidvm | Pretiosovm | Omnivm, | Nec Non | Terrarvm Et Lapidvm | Hactenvs In Vsvm Medicvm | Vocatorvm, | Ad- ditis Observationibvs | Mineralogiam Generatim | Illvstrantibvs, | In Vsvm Avditorvm | Svorum | Descripta | A | D. Ioan. Wilh. Bavmer, | [...8 lines of titles and memberships...] | [rule] | Francofvrti, | Apvd Ioan. Georg. Fleischer. | MDCCLXXI.

8°: π^4 A-I⁸ K-L⁴ (D4 missigned D3); 84ℓ.; [8], [1]-159, [1] p. PAGE SIZE: 180 x 120 mm.

VERY SCARCE. Baumer discusses the uses of gemstones and other mineral substances in medicine, while making it clear that many of the precious variety can not be useful because they will not dissolve in the stomach. However, as a physician he knew that some 'earths' neutralize acid, or are soluble in water, and therefore of potential therepeutic use. He deplores the myths and superstions assigned to many of the stones, especially for there curative powers.

The text is divided into two parts. The first is a classification of gemstones, into precious, semi-precious, spurious, etc., with discussions of physical properties, origins, and differences between species. The second section describes other mineral substances, such as ochre and the earths that were used in medices of he late eighteenth century. Baumer makes note of curious lore and ancient beliefs attached to the same, together with details on the preparation and administration, and ills cured.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 45, 139. • BL: [B.257.(6.)]. • Cobres, *Deliciae Cobresianae*, 1782: 2, 600. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 84. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 238. • LKG: XVI 234. • NUC: 40, 66-7 [NB 0198678]. • Sinkankas, *Gemology Bibliography*, 1993: no. 483.

408. — German, 1774.

D. Johann Wilhelm Baumers | [...2 lines of titles and memberships...] | Naturgeschichte | aller | Edelsteine; | wie auch | der | Erden und Steine, | so bisher zur | Arzney sind gebraucht worden; | mit | beygefügt | Anmerkungen | die die Mineralogie überhaupt erläutern, | zum Gebrauche seiner Zuhörer | beschrieben. | [double rule] | Aus dem Lateinischen übersetzt | von | Karl Freyherrn und Reichsrittern von Meidinger. | [ornate rule] | Wien, zu finden in dem Kraussischen Buchladen, | nächst der Kaiserl. Konigl. Burg., | [ornate rule] | 1774.

8°: A-J⁸ K⁹; 82ℓ.; [1]-149, [13] p. PAGE SIZE: 197 x 116 mm.

CONTENTS: [1-2], Title page, verso blank.; [2 pgs], "Vorbericht."—dated 24 December 1773.; [4 pgs], "Vorrede | des Verfassers."; [1]-149, Text.; [7 pgs], "Register."; [1 pg], "Druckfehler."; [1 pg], Blank.; [3 pgs], Publisher's list.; [1 pg], Blank.

VERY SCARCE. Translated by Karl von Meidinger from *Historia Naturalis Lapidum Pretiosorum Omnium*

BAUMHAUER

(Frankfurt, 1771). The translator improves upon the original by reorganizing material within some paragraphs, correcting errors, and annotating the text through footnotes.

Karl Freiherr von Meidinger. (BORN: Trier, Germany, 1 May 1750; DIED: Vienna, Austria, 1820) *Austrian aristocrat*. Son of Johann Friedrich Freiherr von Meidinger [1726-1777], Meidinger was a royal advisor and consultant on state matters in Vienna.

REFERENCES: Beckmann *P.Ö.B.*: 5, 476. • BL: [972.h.25]. • BMC: 1, 114. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 238. • NUC: 40, 66-7 [NB 0198680]. • Sinkankas, *Gemology Bibliography*, 1993: no. 484. • Ward & Carozzi, *Geology Emerging*, 1984: no. 145. (Meidinger) Lambrecht & Quenstedt, *Catalogus*, 1938: 287. • Poggendorff: 2, col. 102. • Schröter's *Journal für die Liebhaber*: 5, 562-4. • Tornier, *Gesellschaft Naturforschender*, 1924: 33. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91: 17, 277-8.

409. — Latin, 1780.

Historia | Naturalis | Regni Mineralogici | Ad | Naturæ Ductum | Tradita | A | Joan. Wilh. Baumer | [...3 lines of titles and memberships...] | [ornament] | Francofurti | ex Officina Garbiana | MDCCLXXX.

12°: [6], [1]-554, [16] p., 3 folding engraved plates.

SCARCE. The present work is divided into six parts of which the last two, 'De regnis vestalibus' and 'De regnis subterraneis,' occupy the major part of the work. They contain chapters on metals, stones, petrified plants and animals.

REFERENCES: BL: [954.a.28.]. • Cobres, *Deliciæ Cobresianæ*, 1782: p. 600. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 84. • LKG: XII 62a. • NUC: 40, 66-7 [NB 0198678].

410. — Latin, 1779.

Fvndamenta Geographiæ et Hydrographiæ Subterraneæ, ad natvrae dvctvm posita a Ioanne Gvilielmo Bavmer ... Giessæ, Krieger, 1779.

8°: [6], [1]-234, [8] p., folding color plates.

VERY SCARCE. Physical geography.

REFERENCES: LKG: XIII 106a. • NUC: 40, 66-7 [NB 0198675].

411. — Latin, 1785.

Historiam Mercurii Cornei Hassiaci Naturalem et Chymicam Investigation emtradit. Von Johann W. Baumer ... [N.p.], 1785.

4°: 8 p. VERY SCARCE.

REFERENCES: LKG: XVI 293.

412. — Latin, 1761 [Dissertation].

Dissertatio de Mintibus Argillaceo – Calcareis et Argillaceo-Gypseis. Erfurthi, 1761.

4°: VERY SCARCE.

REFERENCES: LKG: XIII 105.

413. — Latin, 1769 [Dissertation].

De re Cattorum Metallica Dissertatio Johann Wilhelm Baumer [Respondent] Ernst Justus Theodor Höpfner. Giessæ, Cattorum, 1769.

4°: 24 p.

RARE. Dissertation — University of Giessen (Ernst Justus Theodor Höpfner, respondent).

REFERENCES: BMC: 6, 66.

BAUMHAUER, Eduard Hendrik van. (BORN: Brussels, Belgium, 1820; DIED: Haarlem, The Netherlands, 1885) *Belgian chemist & mineralogist*.

Baumhauer graduated with a chemistry degree from the University of Utrecht in 1844. He was appointed a professor of chemistry in Amsterdam. He did much practical work in chemistry, publishing papers on a wide range of chemical topics.

REFERENCES: DSB: 1, 527-8. • Fruton, *Bio-Bibliography*, 1982: 43 [other refs.]. • NNBW: 1, 253-4. • Poggendorff: 1, col. 118 & 3, 83-4. • Schaedler, *Biographisch Handwörterbuch*, 1891: 7.

414. — Latin, 1844.

Specimen Meteorologico-Chemicum de ortu Lapidum Meteoricorum, annexis duorum Lapidum analysibus chemicis &c. Trajecti ad Rhenum, 1844.

8°: 83 p., one table. Chemical analysis of meteorites. RARE.

REFERENCES: BMC: 1, 114.



BAUMHAUER

BAUMHAUER, Heinrich Adolf. (BORN: Bonn, Germany, 26 October 1848; DIED: Freiburg, Germany, 1 August 1926) *German crystallographer, mineralogist & chemist*.

From 1866 to '70, Baumhauer was educated at the University of Bonn. Later he attended the University of Göttingen. Appointed professor of mineralogy at the University of Freiburg in 1895, he was also for a short period professor of inorganic chemistry. Baumhauer was elected a member Mineralogical Society of St. Petersburg, Russia. On his suggestion, an index to all chemical publications, the *Chemisches Zentralblatt* edited by German Chemical Society, was founded. He wrote numerous papers on mineralogy and the symmetry of crystals.

REFERENCES: DBA: I 65, 122-126. • DSB: 1, 528-9 [by A. Pabst]. • Fruton, *Bio-Bibliography*, 1982: 43. • *Mineralogical Magazine*: 21 (1927), 230-1, portrait. • NDB: 1, 667-8 [by W. Fischer]. • Poggendorff: 3, 84, 4, 78-9 & ??? . • Sarjeant, *Geologists*, 1980: 2, 509-10 & Suppl. 1 (1986), 1, 278. • *Verhandlungen der Allgemeinen Schweizerischen*

Gesellschaft für die Gesamten Naturwissenschaften: Sess. 107 (Fribourg), Biogr. 1926, 1-15, portrait [by L. Weber]. • WBI. • *World Who's Who in Science*: 131.

415. — German, 1884.

Kurzes Lehrbuch der Mineralogie (einschliesslich Petrographie &c). Freiburg im Breisgau, 1884.

8°: [i]-viii, [1]-190 p., one plate, text illus.

VERY SCARCE. A popular textbook of mineralogy with an introduction to petrology.

German, 1919, Fourth edition: *Kurzes Lehrbuch der Mineralogie mit einem Abriss der Petrographie ... Vierte Auflage ...* Freiburg im Breisgau, Herdersche Verlagshandlung, 1919. 8°: [i]-viii, [1]-234 p., 196 illus.

REFERENCES: BMC: 1, 114.

416. — German, 1889.

Das | Reich der Krystalle | für | Jeden Freund der Natur | insbesondere | Für Mineraliensammler | leichtfasslich dargestellt | von | H. Baumhauer. | [rule] | Mit 281, darunter vielen nach der Natur Gezeichneten | Abbildungen. | [ornate rule] | Leipzig | Verlag von Wilhelm Engelmann | 1889.

8°: [i]-viii, [1]-364 p., text illus. PAGE SIZE: 228 x 145 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, ..."; [iii]-vi, "Vorrede."—signed H. Baumhauer, July 1889.; [vii]-viii, "Inhalt.;" [1]-343, Text.; [344]-351, "Anhang I. | Die Miller'schen Symbole. Messung der Krystallwinkel.;" [352]-360, "Anhang II. | Die wichtigsten Gesteine nach ihrer mineralogischen | Zusammensetzung.;" [361]-364, "Register."

SCARCE. "The Realm of Crystals for every Friend of Nature, especially Mineral Collectors" is a popular style treatise that discusses the unusual beauty of natural mineral crystals. There are chapters on the nature of crystals, their forms, properties, etch figures, twinning, etc., followed by sections discussing the various crystal classes. The crystal classes are explained through the usual crystal drawings as well as fine drawings made from actual specimens. An appendix describes the use of Miller's symbols to label various crystal faces.

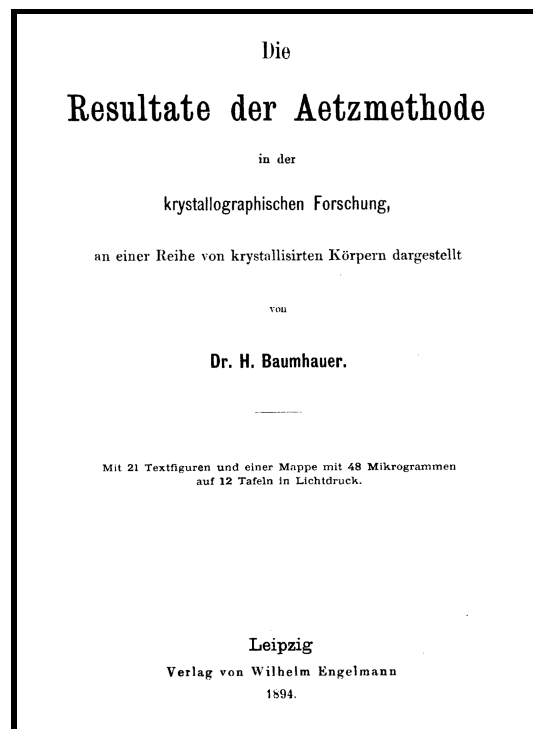
REFERENCES: BMC: 1, 114. • Dana's 7th (Bibliography): 66.

417. — German, 1894.

Die | Resultate der Aetzmethode | in der | kristallographischen Forschung, | an einer Reihe von krystallisirten Körpern dargestellt | von | Dr. H. Baumhauer. | [rule] | Mit 21 Textfiguren und einer Mappe mit 48 Mikrogrammen | auf 12 Tafeln in Lichtdruck. | [ornate rule] | Leipzig | Verlag von Wilhelm Engelmann | 1894.

[LABEL ON ATLAS COVER READS:]

[Within a double rule border:] 12 Tafeln in Lichtdruck | zu den | Resultaten der Aetzmethode | in der | kristallographischen Forschung, | an einer Reihe von krystallisirten Körpern dargestellt | von | Dr. H. Baumhauer. | [ornate rule] | Leipzig | Verlag von Wilhelm Engelmann | 1894.



DIE RESULTATE DER AETZMETHODE, 1894

Text and atlas. (Text) 8°: [i]-vii, [2], [1]-131, [1] p., illus.; (Atlas) 4°: 12 plates. PAGE SIZE: (Text) 230 x 154 mm. (Atlas) 330 x 244 mm.

CONTENTS: (Text) [i-ii], Half title page, "Die | Resultate der Aetzmethode," verso blank.; [iii-iv], Title page, verso "Alle Rechte, ..."; [v]-vi, "Vorwort"—dated July 1894.; [1 pg], "Inhalt.;" [1 pg], Blank.; [1]-131, Text.; [1 pg], "Druck von Breitkopf & Härtel in Leipzig."

(Atlas) 12 plates mounted on card board within a tie down case.

VERY SCARCE. This is an advanced textbook describing in the first 46 pages an introduction to Baumhauer's crystallographic method. The remainder of the book reinforces the theoretical aspects by guiding the reader through nine examples applied to crystal forms of real mineral species such as apatite, dolomite, boracite, cassiterite, etc. The atlas consists of 12 plates individually mounted on cardboard within an accompanying case with tie-down strings.

REFERENCES: BMC: 1, 114. • Dana's 7th (Bibliography): 66.

418. — German, 1899.

Darstellung der 32 möglichen Krystallklassen auf Grund der Deck- und Spiegelachsen, nebst Beschreibung von Achsenmodellen zur Demonstration der Symmetrieverhältnisse der Krystalle. Leipzig, 1899.

8°: iv, 36 p., one plate, text illus. VERY SCARCE.

REFERENCES: BMC: 6, 66.

419. — German, 1901.

BAUSCH

Ueber den Ursprung und die gegenseitigen Beziehungen der Krystallformen. Rektoratsrede, &c. Freiburg (Swiss), 1901.

8°: 346 p. VERY SCARCE.

REFERENCES: BMC: 6, 66.

420. — German, 1905 [First edition].

Die neuere Entwicklung | der | Kristallographie | [rule] | Von | Dr. H. Baumhauer | Professor an der Universität zu Freiburg (Schweiz) | [rule] | Mit 46 eingedruckten Abbildungen | [tapered rule] | Braunschweig | Druck und Verlag von Friedrich Vieweg und Sohn | 1905.

8°: [2], [i]-viii, [1]-184 p., 46 illus. PAGE SIZE: 212 x 134 mm.

CONTENTS: [2 pgs], Blank, verso "Ankündigung."—dated July 1905.; [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso "Alle Rechte, ..."; [v-vi], "Vorwort—der Verfasser."—dated July, 1905.; [vii-viii], "Inhaltsverzeichnis."; [Tipped in errata slip].; [1]-180, Text.; [181]-184, "Anhang."

VERY SCARCE. In the *New Developments in Crystallography* the latest discoveries and methods invented in the science are presented. It was designed to bring workers up to date on the latest trends regarding terminology and symbols, but was not intended to develop a complete training in crystallography. Written less than a decade before X-ray analysis was invented, Baumhauer had a rich selection of practical and theoretical material to draw upon for his text. New facts and theories are discussed regarding symmetry and conditions of crystal formation, methods of instruction, relations between chemistry and crystal form, and twin crystals. An appendix explains the symbol designations applied to crystalline forms by Paul von Groth in his *Physikalische Krystallographie*.

Contents: I. Einleitung (pp. 1-22). II. Kristallklassen und Pseudosymmetrie (pp. 23-72). III. Ermittlung der Symmetrieverhältnisse der Kristalle (pp. 73-108). IV. Zwillingsbildung der Kristalle (pp. 109-128). V. Flächenentwicklung und Wachstum der Kristalle (pp. 129-156). VI. Chemische Kristallographie (pp. 157-180). Anhang (pp. 181-184).

REFERENCES: BMC: 6, 66. • NUC. • USGS Library Catalog.

BAUR, Ludwig.

421. — German, 1901 [First edition].

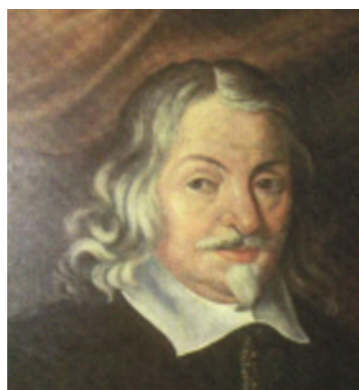
Kurzes Lehrbuch Der Mineralogie Und Geologie Mit Besonderer Berücksichtigung Der Geognostischen Verhältnisse Württembergs. Erster Auflage. Stuttgart, Muth'sche Verlagshandlung, 1901.

8°: 221 p., 164 illus. VERY SCARCE.

REFERENCES: NUC.

422. 3rd edition, 1912: Kurzes Lehrbuch Der Mineralogie Und Geologie. Mit Besonderer Berücksichtigung Der Geognostischen Verhältnisse Württembergs. Zum Gebrauch an Höheren Lehranstalten Sowie Zum Selbstunterricht. Dritte, Verbesserte Auflage. Stuttgart, Muthsche Verlagshandlung, 1912.

8°: vii, 204 p., 194 illus. VERY SCARCE.

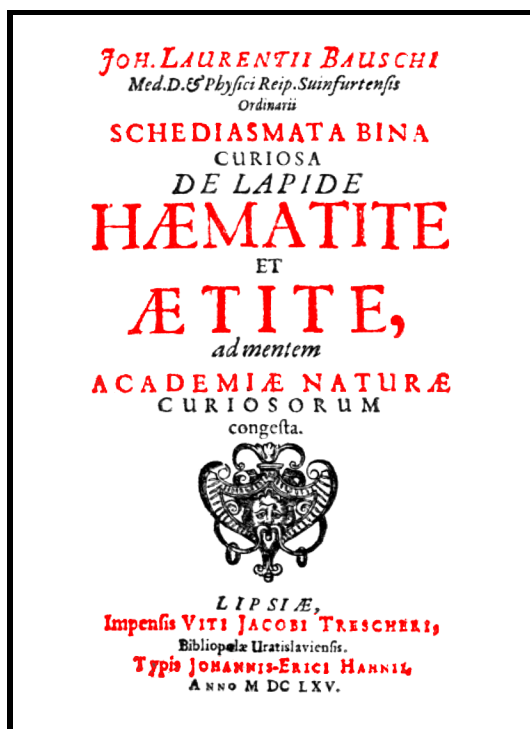


BAUSCH

BAUSCH, Johann Laurentius. (BORN: Schweinfurt, Germany, 30 September 1605; DIED: Schweinfurt, Germany, 18 January 1665) *German botanist and physician.*

Bausch was educated Jena, 1623-26, Marburg, 1626-28, Padua, Italy, 1628-30, finally receiving a degree from Altdorf in 1630. He practiced medicine in Schweinfurt from 1630 onward. Bausch was a founding member and first president of Academie Naturæ Curiosum, the first such society in Europe.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 85. • LKG: 279. • Poggendorff: 1, col. 119. • Thomas, *Dictionary of Biography*, 1884: 312. • *World Who's Who in Science*: 131.



SCHEDIASMATA, 1665

423. — Latin, 1665.

[In red:] Joh. Laurentii Bauschi | [...in black, 2 lines of titles and memberships...] | [in red:] Schediasmata Bina | [in black:] Curiosa | De Lapide | [in red:] Hæmatite | [in black:] et | [in red:] Ætite, | [in black:] ad mentem | [in red:] Academiae Naturæ | [in black:] Curiosorum | congesta. | [ornament] | Lipsiæ, | [in red:] Impensis Viti Jacobi Trescheri, | [in black:] Bibliopolæ Uratislaviensis. | [in red:] Typis Johannis-Erici Hahnii. | [in black:] Anno M DC LXV.

2 parts in one volume. 8°: [4], 164 p., 2 plates.; [8], 79, [1] p., 5 plates. Title in red and black.

RARE. Discusses the supposed medical virtues of bloodstone and Aetite, also called the "Eaglestone." For centuries these stones were thought to impart miraculous cures to those who wore them in finger rings or pendants.

REFERENCES: Agassiz, *Bibliographia Geologiæ*, 1848-54: 1, 215. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 85. • LKG: XVI 256*. • NUC: 40, 190 [NB 0201650]. • Sinkankas, *Gemology Bibliography*, 1993: no. 486 [not seen]. • VD17: 12:186981V. • Ward & Carozzi, *Geology Emerging*, 1984: no. 147 [part 2 only].

424. — Latin, 1668.

Schediasma Posthumum | De | Coeruleo | & Chrysocolle, | Autore | D. Joh. Laurentio | Bauschio, | [...4 lines of titles and memberships...] | [ornament] | Jenæ, | Impensis Viti Jacobi Trescher, | Bibliopolæ Vratislav. | [rule] | Typis Johannis Nisii. | M DC LXVIII.

8°: (a)⁴ A-K⁸ L⁴; 88ℓ.; [8], [1]-168 p. Title in red and black.

RARE. An early discussion of the preparation and use of paint pigments. Such pigments are commonly made from animal, botanical and mineral products. However, pigments of blue color were the most difficult and expensive to make with the very best blue paint usually being made by pulverizing the precious stone lapis lazuli that was found in Afghanistan. This book discusses the color blue, its preparation and the best ingredients to create a pigment. The mineral olivine is also discussed for use in the preparations to present a greener hue to the paint.

REFERENCES: LKG: XVI 329. • NUC: 40, p. 190 [NB 0201652]. • VD17: 39:144785T.

Schediasma ... de Unicornu fossili &c. (Jenæ, 1666).

See: Fehr, Joannes Michael.

BAYLE, M.**425. — French, 1869.**

Cours de minéralogie et de géologie appliquées aux constructions. Par M. Bayle. Éd. de 1869. [Paris,] École impériale des ponts et chausees, 1869.

8°: 464 p., illus. A textbook for a university level course on the application of mineralogy and geology especially as it relates to construction. RARE.

REFERENCES: BL. • NUC.

BAYLEY, William Shirley. (BORN: 1861; DIED: 1943) *American geologist.*

REFERENCES: ABA: I 88, 310-313; II 35, 333-336. • American Men of Science, 6th edition (1938). • Herringshaw's *National Library of American Biography*. • WBI. • *Who Was Who in America*.

426. — English, 1910.

Elementary | Crystallography | Being Part One Of | General Mineralogy | By | W.S. Bayley, Ph.D. | [...2 lines of titles and memberships...] | McGraw-Hill Book Company | 239 West 39th Street, New York | 6 Bouverie Street, London, E.C. | 1910.

8°: [i]-xii, [1]-241 p., illus.

CONTENTS: [i-ii], Half title page, "Elementary Crystallography," verso "McGraw-Hill Book Company."; [iii-iv], Title page, verso "Copyright, 1910, | By The | McGraw-Hill Book Company."; [v]-vi, "Preface."; [vii]-viii, "Contents."; [ix]-xii, "Introduction."; [1 pg], Blank; [1]-233, Text.; [234], Blank.; [235]-241, "Index."; [1 pg], Blank.

VERY SCARCE. The introduction provides information on the objectives, history and general description of mineralogy. The text proper is a general survey of crystallography and is divided into three parts: geometrical, physical and chemical crystallography.

REFERENCES: BMC: 6, 67. • NUC.

427. — English, 1915.

Minerals And Rocks | The Elements Of Mineralogy And Lithology | For The Use Of | Students In General Geology | By | William Shirley Bayley, Ph.D. | Professor of Geology in the University of Illinois | [ornament] | New York And London | D. Appleton And Company | 1915.

8°: [i]-viii, [1]-227 p., 104 illus.

CONTENTS: [i-ii], Half title page, "Minerals And Rocks," verso blank.; [iii-iv], Title page, verso "Copyright, 1915 By | D. Appleton And Company."; [v]-[vi], "Preface."—signed William Shirley Bayley, 5 July 1915.; vii-viii, "Contents."; [1 pg], Sectional title page, "Minerals And Rocks"; [1 pg], Blank.; [1]-218, Text.; [219]-227, "Index."; [1 pg], Blank.

VERY SCARCE. A descriptive textbook that describes the prominent characters of the common minerals. The introduction is brief, and there is a chapter on the use of the blowpipe with key tables. At the end, a short section describes the classification of rocks, with instructions on their determination.

REFERENCES: BMC: 6, 67. • *Mineralogical Magazine*: 19 (1922), 114 [by L.J. Spencer]. • NUC.

428. — English, 1917.

Descriptive | Mineralogy | By | William Shirley Bayley, Ph.D. | [...2 lines of titles and memberships...] | [ornament] | With Two Hundred Sixty-Eight Illustrations | D. Appleton And Company | New York and London | 1917.

8°: [i]-xvii, [1], [1]-542 p., 268 illus.

CONTENTS: [i-ii], Half title page, "Descriptive Mineralogy," verso blank.; [iii-iv], Title page, verso "Copyright, 1917, by | D. Appleton And Company.";

BECCARI

[v], Dedication.; [vi], Blank.; [vii]-viii, "Preface."—signed W.S. Bayley.; [ix]-x, "Contents.;" xi-xviii, "List Of Illustrations.;" [1 pg], Blank.; [1]-494, Text.; 495-512, "Appendices I. Guide to the Description of Minerals.;" 513-520, "Appendices II. List of the More Important Minerals Arranged According to their Principal Constituents.;" 521-526, "Appendices III. List of Minerals Arranged According to their Crystallization.;" 527-528, "Appendices IV. List of Reference Books.;" [529]-534, "General Index.;" [535]-542, "Index Of Minerals."

VERY SCARCE. A large textbook on mineralogy almost entirely devoted to mineral descriptions and several appendices that list the material by alternative methods. It is fully illustrated with 268 pictures and crystal drawings.

REFERENCES: NUC.

BAYLY, G.

429. — English, 1799 [Sale catalog].

A Catalogue (Part Second) comprising the ... collection of Shells, Fossils, Stuffed Birds, Minerals, Insects &c. ... Mr. G. Bayly &c. London, 1799.

8°: 20 p.

RARE. The recently deceased Bayly's natural history collection was auctioned in 452 lots on May 2-4, & 6, 1799 by the auction house of King.

REFERENCES: BMC: 1, 116. • Chalmers-Hunt, *Natural History Auctions*, 1976: 66.

BEALE, William Phipson, Sir. (BORN: 1839; DIED: 1922) *English crystallographer & mineralogist.*

Member of parliament. Fellow of the Chemical and Geological Societies. Treasurer of the Mineralogical Society.

REFERENCES: BBA: I 82, 388; II 1291, 96-97. • WBI.

430. — English, 1915.

An Amateur's | Introduction To | Crystallography | (From Morphological Observations) | By | Sir William Phipson Beale, Bart., K.C., M.P. | [...2 lines of titles and memberships...] | With Diagrams | Longmans, Green And Co. | 39 Paternoster Row, London | Fourth Avenue & 30th Street, New York | Bombay, Calcutta, And Madras | 1915.

8°: [i]-vi, [1], [1]-220 p., one plate, illus. PAGE SIZE: 226 x 140 mm.

CONTENTS: [i-ii], Half title page, "An Amateur's Introduction To | Crystallography," verso blank.; [Frontispiece]; [iii-iv], Title page, verso blank.; v-vi, "Preface.;" vii, "Contents.;" [1 pg], Blank.; 1-169, Text.; [170], Blank.; 171-206, "Appendix A. | Methods Of Calculation.;" 207-218, "Appendix B. | Drawing Of Crystals From Elements | And Indices.;" 219-220, "Index."

SCARCE. A basic introductory text designed for the curious amateur that describes the nature of crystals, the fundamental laws of crystallization, practical methods of measurement, stereographic projection, calculation of elements and indices with practical illustrations, and the thirty-two classes. Appendices at the end describe the calculation of zones and faces and the method of drawing crystal diagrams from their elements and indices. This book is useful in

AN AMATEUR'S INTRODUCTION TO CRYSTALLOGRAPHY

(FROM MORPHOLOGICAL OBSERVATIONS)

BY
SIR WILLIAM PHIPSON BEALE, BART., K.C., M.P.
FELLOW OF THE GEOLOGICAL AND CHEMICAL SOCIETIES
TREASURER OF THE MINERALOGICAL SOCIETY

WITH DIAGRAMS

LONGMANS, GREEN AND CO.
39 PATERNOSTER ROW, LONDON
FOURTH AVENUE & 30TH STREET, NEW YORK
BOMBAY, CALCUTTA, AND MADRAS
1915

AMATEUR'S INTRODUCTION, 1915

presenting its material from a different point of view than most other crystallographic textbooks.

REFERENCES: BMC: 6, 68. • *Mineralogical Magazine*: 19 (1922), 113 [by L.J. Spencer].

BECCARI, Jacopo Bartolomeo. (BORN: Bologna, Italy, 25 July 1682; DIED: Bologna, Italy, 1766) *Italian physician.*

Beccari was professor of physics at the Institute Sciences and Arts in Bologna. He was elected president in 1723. In 1709 he was appointed professor of logic at the University of Bologna, later becoming professor of medicine in 1712. Beccari was named the first professor of chemistry at any Italian university (Bologna) in 1737. Elected a Fellow of the Royal Society of London in 1728. His best remembered studies describe phosphorescence, sexual functions, and the effect of light on silver salts.

REFERENCES: ABI: I 124, 62-75; II 46, 112. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • Frati, *Dizionario Bio-bibliografico Italiani*, 1933. • Jöcher, *Gelehrten-Lexikon, Supplement.* • Mazzetti, *Repertorio di Tutti i Professori*, 1848. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • Poggendorff: 1, col. 1534. • Provenzal, *Bio-Bibliografici di Chimici Italiani*, 1938: pp. 27-32. • WBI. • *World Who's Who in Science*: 137.

431. — Italian, 1764 [Dissertation].

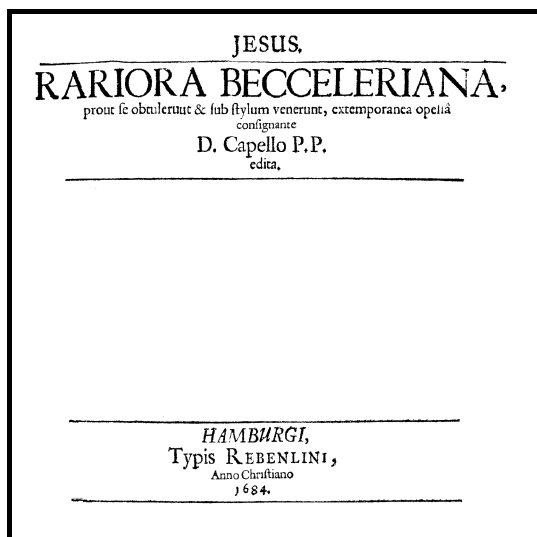
Osservazioni Intorno alla Doppia Refrazione del Cristallo di Rocca, di Io. Bapt. Beccaria. Turino, 1764.

4°: A-B⁴; 8ℓ.; no pagination.

EXTREMELY RARE. Technical discussion of the phenomena of double refraction in quartz crystals. Newton had earlier shown that quartz or rock crystal like Iceland spar would refract light rays that passed

through it, although this phenomena is much less pronounced in quartz. In this work Beccari shows that the three different axis of a crystal refract light in different ways. No copy of this title has been traced, however, an earlier paper by Beccari appeared: "On the double refraction of crystals" (*Philosophical Transactions of the Royal Society of London*, **52** (1761), p. 486-490.).

REFERENCES: *Berlinische Sammlungen*: **3** (1765), 545. • BL: [no copy listed]. • LKG: XVI 314. • NUC: [no copy listed]. • *Physikalisch-Oekonomische Auszüge*: **7**, 480.



RARIORA BECCELERIANA, 1684

BECCELER, Georg. (BORN: Ulm, Germany, 16 September 1609; DIED: Hamburg, Germany, 8 May 1681) *German natural history collector.*

REFERENCES: Internet search.

432. — Latin, 1684 [Collection catalog].

Jesus. | [rule] | Rariora Becceleriana, | prout se obtulerunt & sub stylum venerunt, extemporanea opellâ | consignante | D. Capello P.P. | edita. | [rule] | Hamburgi, | Typis Rebenlini, | Anno Christiano | 1684. | [rule].

2°: [14], 117 (i.e., 121), [11] p., frontispiece, 3 plates. Pages 115-117 are repeated in the pagination.

VERY RARE. Collection/sale catalog of Becceler's natural history collection prepared by Rudolf Capell, and after his unexpected death, completed and edited by Johann Vegetius. Becceler's cabinet besides various animals and birds also contained minerals. In 1750, the catalog of the coin collection was published with the intention of selling it.

Rudolf Capell. (BORN: 1635; DIED: 1684) *German theologian, historian & philologist.* Capell studied at Wittenberg and Giessen. He became a professor at the University of Hamburg.

Johann Veget. (BORN: Geverstorf an der Oste, Germany, 10 June 1633; DIED: Hamburg, Germany, 12

June 1691) *German theologian & philologist.* Vegetius began studying theology at the University of Jena in 1654. In 1662, he was named Rector in Verden. Then in 1676 he accepted the position of professor of logic and metaphysics at the Gymnasium in Hamburg. His residence soon became the meeting place for the intellectuals of the city.

REFERENCES: BL: [7757.h.12.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: **1**, 259. • NUC: **42**, 88 [NB 0232285]. • VD17: 23:292839F. • Wilson, *History of Mineral Collecting*, 1994: 160 & 204. (Capell) ADB. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI. (Vaget) Jöcher, *Gelehrten-Lexikon*, 1750-51. • Wahl, *Naturforschung im alten Hamburg*, 1928: p. 31. • WBI.

BECHER, Friedrich Liebegott. (BORN: 1765; DIED: 1830) *German philosopher & teacher.*

REFERENCES: DBA: **I** 68, 229-244. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • WBI.

433. — German, 1819.

Die Mineralogen, Georg Agricola zu Chemnitz, im sechszehnten, und A.G. Werner zu Freiberg, im neunzehnten Jahrhunderte. Winke zu einer biographischen Zusammenstellung aus sachsens Culturgeschichte ... Freiberg, Bei Craz und Gerlach, 1819.

8°: [1]-67 p.

RARE. A biographical study of the mineralogists, Georgius Agricola and Abraham Gottlob Werner, and their respective influence on the science.

Facsimile reprint, 1996: Friedrich Liebegott Becher. *Georgius Agricola (1494-1555) und Abraham Gottlob Werner (1749-1817).* Eine vergleichende Biographie aus dem Jahre 1819. Erstmalig vollständig, mit dem von der Zensur verbotenen Nachtrag herausgegeben, Kommentiert und mit Anmerkungen versehen von Günter Hoppe und Helmut Otto. Berlin, Engel, 1996. viii, 127 p., notes.

REFERENCES: BL: [10703.bb.50.(2.)]. • Hoover Collection: no. 106. • NUC: **42**, 115.



BECHER

BECHER

BECHER (Beccher), Johann Joachim. (BORN: Speyer, Germany, 6 May 1635; DIED: London, England?, October 1682?) *German physician & alchemist.*

Becher was mostly self-educated, although he was awarded the degree of M.D. from the University of Mainz in 1661. In 1663, he was appointed professor of medicine at Mainz and physician to the elector of Mainz. From 1664 to 1666, he stayed in Munich where that cities regent had furnished him with a laboratory. But in 1666, he was obliged to leave Munich. He went to Vienna, but in 1666 Leopold appointed him Imperial Commercial Advisor. In 1669 he arranged with the Dutch West Indies Company for a colony, in the South America. Becher was appointed public professor of medicine at the University of Mainz. He was appointed chamberlain to Count Zinzendorf in Vienna. While there he established a Werkhaus containing a chemical lab for manufacturing pigments as well as for working with wool, silk, and glass. In 1678, Becher went to Holland, where he sold the city of Haarlem a plan for a machine that would spool silk cocoons. In 1679 an invitation of Prince Rupert caused him to go to England where he inspected mines in Cornwall (and Scotland?).

REFERENCES: *Biographie Universelle*: 3, 451-2. • DBA: I 68, 251-256; 512, 63-72. • DSB: 1, 548-51 [by A.G. Debus]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 90. • Frühsorge, G. and G.F. Strasser, eds., *Johann Joachim Becher (1635-1682)*. Wiesbaden, Harrassowitz, 1993. 238 p., illus. [Published as: *Wolfenbütteler Arbeiten zur Barockforschung*, v22.]. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jaffe, *Crucibles: The Great Chemists*, 1936: 34-50, portrait. • Partington, *History of Chemistry*, 1961-70: 2, 637-40, portrait. • Poggendorff: 1, cols. 124-5. • Schaedler, *Biographisch Handwörterbuch*, 1891: 7-8. • Smith, P.H., *The business of alchemy: Science and culture in the Holy Roman Empire*. Princeton, N.J.: Princeton Univ. Press, 1994. xii, 308 p., illus. [Focuses on the career of Johann Joachim Becher (1635-1682).]. • Thomson, *History of Chemistry*, 1830-1: 1, 246-8. • WBI.

Natur-Kündigung der Metallen

434. — German, 1661 [First edition].

Natur=Kündigung | Der | Metallen. | Mit vielen Curiosen/ Beweiß= | thumben/ Natürlichen Gründen/ Gleich= | nüssen/ Erfahrenheiten/ und bißhero Ohnge= | meinen Auffmerckungen vor Augen | gestellet. | Zur Erhaltung der Warheit/ Erläute= | rung der Spagirischen Philosophi, und | Gefallen der Liebhabern. | Verfertigt durch | Johannem Joachimum Bechern | von Speyer/ Mathematicum, Medicum. | Lege totum & Relege. | Esdræ IV. c.8.v.2. | Edisseram autem tibi similitudinem Esdra. Eninvero, | sicut seiscitanti Terra dicat tibi, se gignere perquàm copiosam quidem humum fin- | gendis fictilibus; Parvum autem Pulverem unde Aurum Fit, ita se habet | præsentis ævi Negotium. | Cum Gratia & Privil. Sac. Casar. Majest. | [ornament] | Franckfurt/ | In Verlegung Johan Wilhelm Ammons | und Wilhelm Serlins. | [rule] | Anno M DC LXI.

8°: [16], 347, [37] p.

RARE. Becher's first published work. Discusses metallurgical problems on the basis of the four elements

theory, and deals with the generation of metals and testing ores.

REFERENCES: CBN: 9, col. 816. • NUC: 42, 117-20 [NB 0233002]. • VD17: 23:242166Y.

435. 2nd edition, 1679: Natur=Kündigung | Der | Metallen. | Mit vielen Curiosen Beweiß= | thumben/ Natürlichen Gründen/ | Gleichnüssen/ Erfahrenheiten/ und bißhero | ohngemeinen Auffmerckungen vor | Augen gestellet. | Zur Erhaltung der Warheit/ Erläuterung | der Spagirischen Philosophi, und Gefallen | der Liebhabern. | Verfertigt durch | Johannem Joachimum Bechern | von Speyer/ Mathematicum, Medicum. | Lege totum & Relege. | Esdræ IV. c.8.v.2. | Edisseram autem tibi similitudinem Esdra. | Eninvero, sicut seiscitanti Terra dicat tibi, se | gignere perquàm copiosam quidem humum fin- | gendis fictilibus; Parvum autem Pulverem | unde Aurum Fit, ita se haber præsentis ævi | Negotium. | Cum Gratia & Privil. Sac. Casar. Majest. | [ornate rule] | Franckfurt am Mayn/ | Bey Christian Hermsdorffen zu finden. | Im Jahr 1679.

8°: [16], 347, [36] p., one plate. RARE.

REFERENCES: BL: [1034.a.6]. • CBN: 9, col. 817. • VD17: 23:240130Z.

436. 3rd edition, 1705: Natur-Kündigung der Metallen. Mit vielen curiösen Beweißthümen, natürlichen Gründen, Gleichnissen, Erfahrenheiten, und bisshero ungemeynen Auffmerckungen vor Augen gestellet. Zu Erhaltung der Wahrheit, Erläuterung der Spagirischen Philosophi, und Gefallen der Liebhabern. Verfertigt durch Johannem Joachimum Bechern, von Speyer, Mathematicum, Medicum. ... Franckfurt am Mayn, In Verlegung Martin Hermsdorffs. An. 1705.

8°: [12], 347, [36] p., engraved title page.

SCARCE. Last edition of a work that first appeared in 1661 called "Metallurgia" on the engraved title page.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 86. • NUC: 42, 117-20 [NB 0233003]. • Sallander, *Bibliotheca Walleriana*, 1955: no. 11062. • Wellcome Catalog (Books): 2, 125.

Physica Subterraneæ

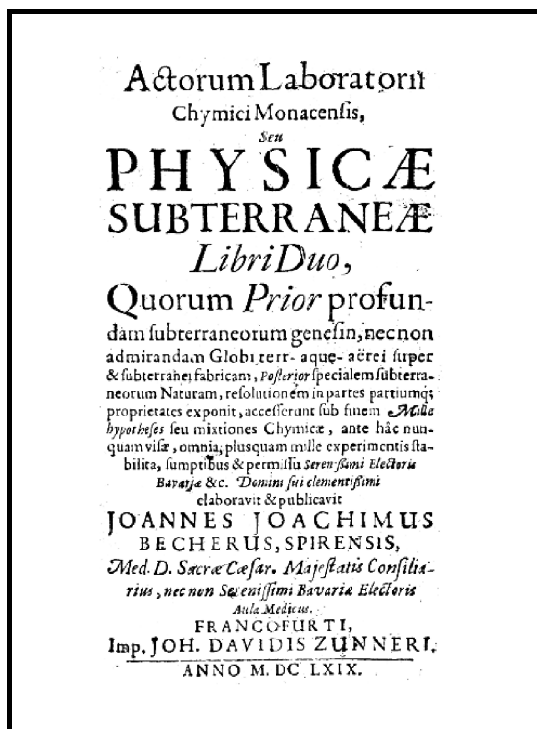
437. — Latin, 1669 [First edition].

Actorum Laboratorii | Chymici Monacensis, | Seu | Physicæ | Subterraneæ | Libri Duo, | Quorum Prior profun- | dam subterraneorum genesin, nec non | admirandam Globi terraque-ærei super | & subterranei fabricam, Posterior specialem subterra- | neorum Naturam, resolutionem in partes partiumq; | proprietates exponit, accessertunt sub finem Mille | hypotheses seu mixtiones Chymicæ, ante hâc nun- | quam visæ, omnia, plus quam mille experimentis sta- | bilita, sumptibus & permissu Serenissimi Electoris | Bavarjæ &c. Domini sui clementissimi | elaboravit & publicavit | Joannes Joachimus | Becherus, Spirensis, | [...3 lines of titles and memberships...] | Francofurti, | Imp. Joh. Davidis Zunneri. | [rule] | Anno M. DC. LXIX.

8°: A-B⁸ C³ 2A-2C⁸ D-Z⁸ Aa-Rr⁸; 341ℓ.; [40], 633, [9] p., one folding plate.

RARE.

In his *Physicæ subterraneæ* (1667) Becher concluded that bodies were composed of three earths-terra lapidea (vitreous), terra mercurialis (mercurial),



PHYSICA SUBTERRANÆ, 1669

and terra pinguis (fatty). He considered combustible substances to be rich in terra pinguis, which was lost during burning. Even metals that were calcinable contained some of the fatty earth. Stahl later developed these ideas into an elaborate chemical system in which the term "phlogiston" replaced terra pinguis.

The potential comprehensiveness of the phlogiston theory proved amazingly good in a world in which chemistry still held a qualitative attitude toward matter. Not only did the theory explain combustion and calcination as being caused by the loss of phlogiston, it explained the smelting of ores equally well. Since the ore (calx) of a metal is converted into metal by heating with charcoal, a substance rich in phlogiston, Stahl argued that phlogiston was transferred from the charcoal to the calx, converting the later into a metal.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 56. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 88. • Hoover Collection: no. 107. • NUC: 42, 117-20 [NB 0232956]. • Roller & Goodman, *Catalogue*, 1976: 1, 92. • VD17: 23:242428D. • Ward & Carozzi, *Geology Emerging*, 1984: no. 156.

438. Supplement 1, 1671: Joh. Joachimi Becheri, | [... 2 lines of titles and memberships...] | Experimentum | Chymicum Novum, | Quo | Artificialis & instantanea Metallorum | Generatio & Transmutatio | ad oculum demonstratur. | Loco Supplementi in Physicam | suam subterraneam | et | Responsi ad D. Rolfincii Schedas | de non Entitate Mercurii | corporum. | Opusculum multis experimentis practicis, | nec non præcipuis Philosophorum dictis explicatis | refertum, Lectori Philochymico non | ingraturum futurum. | [ornament] | Francofurti, | Sumptibus Joh. Davidis Zunneri. | Typis Henrici Friesii. | [rule] | M. DC. LXXI.

8°: A-K⁸ L⁶; 56ℓ.; [1]-172 p. Ornamental head- and tailpieces.

VERY SCARCE. First supplement to his *Actorum laboratorii chymici Monacensis, seu Physicæ subterraneæ libri duo*, first published in 1669.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 56. • Hoover Collection: no. 108. • NUC: 42, 117-20 [NB 0232873]. • VD17: 39:117962W.

439. Supplement 2, 1675: Supplementum Secvdm | In Physicam Subterra- | neam. | Id est: | Joannis Joachimi Becheri | [...2 lines of titles and memberships...] | Demonstratio Philosophica, | Seu | These Chymicæ, | Veritatem, & Possibilitatem transmutationis | metallorum in aurum evincentes. | Ad | Invictissimum Romanorum | Imperatorem | Leopoldum. | Encomium Chymicæ Av- | gystini Petraræ. | Nobilissima ars Chemiæ, hominem sanum à | morbis præservat, ægrum sanitat, restituit pauperem ab | inopia, sublevat naturam, addita eruit, animum soli- | dâ scientia imbuat, nulli in injuriam facit, omnibus prodest, | & tandem ad ipsam DEI cognitionem | adducit. | [ornament] | Francofurti, | Impensis Joh. Davidis Zunneri. | [rule] | Anno M DC LXXV.

8°: [48], 136 p. VERY SCARCE.

REFERENCES: NUC: 42, 117-20 [NB 0233023].

440. Supplement 3, issue A, 1680: Joannis Joachimi Becheri, | Med. Doct. Sacr. Cæs. Maj. Consil. | Experimentum | Novum Accuriosum | De | Minera | Arenaria | Perpetua. | Sive | Prodrum Historiæ, | Sev | Propositionis Præp. D.D. Hollandiæ | Ordinibus ab Authore factæ, circa Auri extra- | ctionem mediante Arena littorali, per modum mi- | neræ perpetuæ seu operatiionis magnæ fuso- | riæ cum emolumento. | Loco Supplementi Ter- | tii in Physicam suam subterraneam. | [ornament] | Francofurti, impensis Mauriti | Georgii Weidmanni | M DC LXXX.

8°: A-L⁸ M⁴ (\$5 signed); 92ℓ.; [1]-136, [48] p. VERY SCARCE.

CONTENTS: [1-2], Title page, verso blank.; [3], Warning to the reader.; 4-5, Dedication, dated 1680.; 6-12, Preface.; 13-18, Introduction.; 19-133, Text.; 134-136, "Postmonitio."; [6 pgs], Contents.; [5 pgs], "... Catalogus Secretorum | Cuniculorum ..."; [29 pgs], "Theoria & experientia de nova temporis dimetiendi ratione, & accurata horologiorum constructione."; [8 pgs], Catalog of the works of Becher, published and forthcoming.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 24. • Mellon, *Alchemy and the Occult*, 1968-77: no. ?? . • NUC: 42, 117-20 [NB 0232975]. • VD17: 39:117928R.

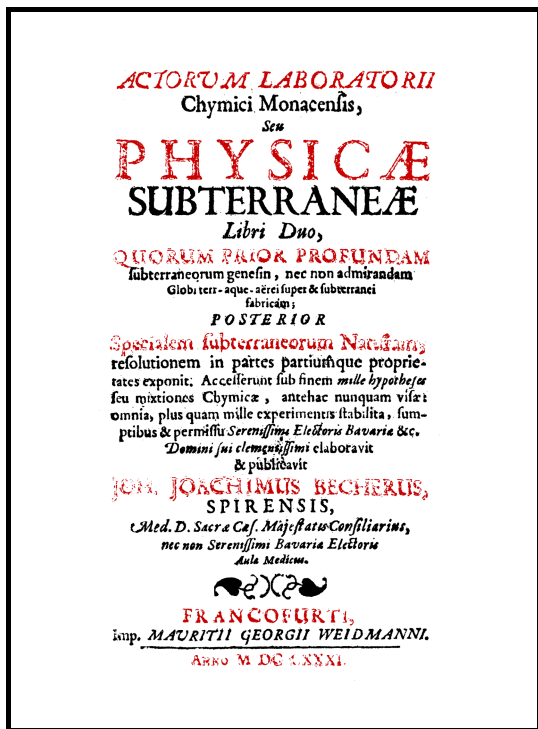
441. Supplement 3, issue B, 1680: Joannis Joachimi Becheri | Med. Doct. Sacr. Cæs. Majest. Consil. | Mineral Arenaria | Perpetua: | Sive | Prodrum Historiæ, | Seu | Propositionis Præ: D.D. Statibus Hollandiæ | ab Authore Factæ, circa Auri Extracti- | onem, Mediante Arena Littorali, per | modum Mineræ Perpetuæ, seu Opera- | tionis | Magnæ Fusoriæ cum Emolumento. | [rule] | Scriptum hoc, inservire poterit Lectori, pro Continuatione | Trifolii Hollandici, & Supplementi Tertii in Au- | thoris Physicam Subterraneam. | [rule] | Londini: Typis T.N. & venales prostant apud Marcum | Pardoe, sub signo Corvi Nigri è regione Palatii Bedfor- | diensis in viâ Regiâ vulgo dictâ The Strand. 1680.

8°: A-P⁴; 60ℓ.; [1]-112, [8] p.

CONTENTS: [1], Title page.; [2], "Præmonitio."; 3-4, Dedication.; 5-10, "Præfatio | Ad | Lectorem."; 11-16, "Introitus."; 17-108, Text.; 109-112, "Conclusio."; [1 pg], "Postmonitio."; [6 pgs], "Index."; [1 pg], "Omissa sic Restituenda."

RARE. This London imprint is unknown to most bibliographies, but may supercede the Frankfurt issue of the same year.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 57. • NUC: 42, 117-20.



PHYSICÆ SUBTERRANEÆ, 1681

442. 2nd edition, 1681: [In red:] *Actorvm Laboratorii* | [in black:] *Chymici Monacensis*, | *Seu* | [in red:] *Physicæ* | [in black:] *Subterraneæ* | *Libro Duo*, | [in red:] *Quorum Prior Profundam* | [in black:] *subterraneorum genesin, nec non admirandam* | *Globi terr-aque-aërei super & subterranei* | *fabricam*; | *Posterior* | [in red:] *Specialem subterraneorum Naturam* | *resolutionem in partes partiumque proprietates exponit. Accesserunt sub finem mille hypothese seu mixtiones Chymicæ, antehac nunquam visæ omnia, plus quam mille experimentis stabilita, sumptibus & permissu Serenissimi Electoris Bavarie &c. Domini sui elementissimi elaboravit & publicavit* | [in red:] *Joh. Joachimus Becherus*, | [in black:] *Spirensis*, | [...3 lines of titles and memberships...] | [in red:] *Francofurti*, | [in black:] *Imp. Mauricii Georgii Weidmanni*. | [rule] | [in red:] *Anno M DC LXXXI*.

8°: *7 A-Eee⁸ Fff⁴ (\$5 signed except *2); 419ℓ.; [14], 1-560, [2], 561-678, [2], 679-810, [10] p.

CONTENTS: [2 pgs], Title page, verso blank.; [10 pgs], Dedication to Prince Ferdinand Maria.; [2 pgs], Preface.; 1-9, Introduction.; 10-560, Text.; [1 pg], Sectional title page, "Joh. Joachimi Becheri, | *Spirensis Med. Doct.* | *Sacr. Cæs. Maj. Consilarii.* | *Experimentum* | *Chymicum Novum*, | *Qvo* | *Artificialis instantanea Metallorum* | *Generatio & Transmutatio* | *ad oculum demonstratur.* | *Loco Supplementi in Physicam suam subterraneam* | *Et Respondi ad D. Rolfincii* | *Schedas de non Entitate Mercurij* | *corporum.* | *Opusculum multis experimentis practicis, nec non præ-* | *cipuis Philosophorum dictis explicatis refertum, Lectori* | *Philochymico non ingratum futurum.*"; [1 pg], Expanded title.; 561-675, Text.; 672-673, List of authorities cited.; 674-675, Bibliography of works cited.; 676-678, List of experiments reviewed.; [1 pg], Sectional title page, "Supplementum Secundum | *In Physicam Subterra-* | *neam.* | *Id est:* | *Joannis Joachimi Becheri,* | *Spirensis, Med. Doct.* | *Sacr. Cæs. Maj. Consilarii* | *Demonstratio Philo-* | *sophica,* |

Seu | *Theses Chymicæ,* | *Veritatem, & Possibilitatem transmutationis* | *metallorum in aurum evincentes,* | *Ad* | *Invictissimum Romanorum* | *Imperatorem* | *Leopoldum.* | *Encomium Chymicæ Au-* | *gustini Petraci.* | *Nobilissima ars Chymicæ, hominem sanum à morbis* | *præservat,* | *ægrum sanitat, restituit pauperem ab inopia, sublevat* | *naturam, abdita eruit, animum solidâ scientiâ imbuat, nulli,* | *in-* | *juriam facit, omnibus prodest, & tandem ad ipsam* | *Dei cognitionem adducit.*"; [1 pg], Quotations.; 679-692, Preface.; 693-702, "Præliminaria ..."; 703-810, Text.; [10 pgs], Index.

VERY SCARCE. Includes reprints of the three supplements that each appeared separately in 1671, 1675 and 1680.

REFERENCES: Bolton, *Bibliography of Chemistry*, 1893: 289. • Cole, *Chemical Literature*, 1988: no. 67. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 88. • Mellon, *Alchemy and the Occult*, 1968-77: no. 138. • NUC: 42, 117-20 [NB 0232957]. • VD17: 39:117920E. • Wellcome Catalog (Books): 2, 125.

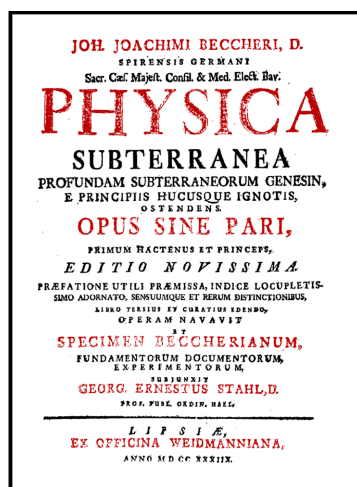
443. 3rd edition, 1703: *Joh. Joachimi Becheri D. Spirensis Germani ... Physica Subterranea Profundam Subterraneorum genesin e principiis hucusque ignotis, ostendens: Opus sine pari, primum hactenus & princeps ... Praefatione utili præmissa, indice locupletissimo adornato, sensuumque & rerum distinctionibus, libro tersius et curatius edendo, operam navavit; & Specimen Beccherianum, fundamentorum, documentorum, experimentorum, subjunxit Georg. Ernestus Stahl ... Editio novissima. Lipsiae, Apud Joh. Ludov. Gleditschium, 1703.*

8°: [30], 560, [2], 561-1008 (i.e., 996), [36], [8], 304, [16] p., [1] leaf of plates. Page nos. 655-656, 823-832 omitted in paging; only 3F4-3Z8 omitted in signing. With 3 supplements; 1st and 2d with half-title, the 3d with special t.-p. Continuous paging; signatures continuous to Supplement 1. Half-title to Supplement 1 not included in paging. Supplements titled: 1. *Experimentum chymicum novum ... et Responsi ad D. Rolfincii Schedas de non entitate Mercurij corporum.* 2: *Demonstratio philosophica, seu Theses chymicæ veritatem & possibilitatem transmutationis metallorum in aurum evincentes.* 3: *Experimentum novum ac curiosum de Minera Arenaria perpetua.* Supplements also published separately; cf. Duveen, LC. Titlepage in read and black, with vignette; head- and tail-pieces, initials. Includes indexes.

VERY SCARCE. First published in 1669 under the title: *Actorum laboratorii chymici monacensis, seu Physicæ subterraneæ libri duo*. This is the first edition revised by Stahl, and especially important in connection with Stahl's development of the phlogiston theory. It includes the first edition of Stahl's "Specimen Beccherianum, sistens fundamenta, documenta, experimenta, quibus principia mixtionis subterraneæ & instrumenta naturalia atque artificialia demonstrantur" with its own special title page, separate paging and signatures.

REFERENCES: Bolton, *Bibliography of Chemistry*, 1893: p. 292-3. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 88-9. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 24. • NUC: 42, 117-20 [NB 0233014].

444. 4th edition, 1738: [In red:] *Joh. Joachimi Becheri, D.* | [in black:] *Spirensis Germani* | *Sacr. Cæs. Majest. Consil. & Med. Elect. Bav.* | [in red:] *Physica* | [in black:] *Subterranea* | *Profundam Subterraneorum Genesin,* | *E Principiis Hucusque Ignotis,* | *Ostendens.* | [in red:] *Opus Sine Pari,* | [in black:] *Primum Hactenus Et Princeps,* | *Editio Novissima.* | *Præfatione Utili Præmissa, Indice Locupletis-* | *simo Adornato, Sensuumque Et Rerum Distinctionibus,* | *Libro Tersius Et Curatius Edendo,* | *Operam Navavit* | *Et* | [in red:] *Specimen Beccherianum,* | [in black:] *Fundamentorum Documentorum,* | *Experimentorum,* | *Subjunxit* | [in red:] *Georg. Ernestus Stahl, D.* | [in black:] *Prof. Publ. Ordin. Hall,* | [rule] | *Lipsiæ,* | [in red:] *Ex Officina Weidmanniana,* | [in black:] *Anno M D CC XXXIIX.*



PHYSICÆ SUBTERRANÆ, 1738

4^o:)(3)(4 A-Ssss⁴ (\$3 signed except 3V; 2S3 as Ts3); 355L.; [14], 1-504, [18], [4], 1-161, [9] p., frontispiece.

CONTENTS: [2 pgs], Title page, verso blank.; [8 pgs], Preface by G.E. Stahl.; [3 pgs], Author's preface.; [1 pg], Contents.; 1-5, "Introitus."; 6-[282], Text.; [283]-341, Text.; 342-343, "Index Autorum."; 344, "Catalogus scriptorum hoc opere citatorum."; 345-[348], "Syllabus Experimentorum."; [349]-355, "Praefatio ad Lectorem."; 356-360, "Praeliminaria ..."; 361-416, Text.; [417], "Praemonitio."; 418, Dedication.; 419-421, "Praefatio ad Lectorem..."; 422-425, "Introitus."; 426-502, Text.; 503-504, Ex hac Demonstratione mea mathematica ...; [18 pgs], "Index Rerum."; [2 pgs], "Specimen Beccherianum ...", verso blank.; [2 pgs], "Praeloquium."; 1-161, Text.; [9 pgs], "Index Rerum."

SCARCE. This is the last edition of Becher's famous work, and the only one published in quarto. "Stahl's edition of Becher's most important work (first published in 1669) the foundation of the phlogosiston theory. Its influence on Stahl was immense, and resulted in the present edition. To Becher's text, Stahl adds a 161 page commentary on Becher's theories, "Specimen Beccherianum," along with his own interpretations, modifications and innovations." This edition contains the three supplements as well.

First published 1669 with title: *Actorum Laboratorii Chymici Monacensis*; published in 1703 with title: *Physica Subterranea*. Includes three supplements of earlier editions. Includes indexes.

REFERENCES: BMC: 1, 118. • Bolton, *Bibliography of Chemistry*, 1893: p. 293. • Cole, *Chemical Literature*, 1988: no. 68. • Davies, T.L., "Neglected evidence in the history of phlogiston," *Annals of Medical History*, 6 (1924), 280-7. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 59. • Edelstein, *Catalog of the History of Chemistry*, 1981: 188. • Ferchl: p. 30. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 89. • LKG: XII 58. • Mellon, *Alchemy and the Occult*, 1968-77: no. 155. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 340. • NLM 18th Century Books (Blake): 37. • NUC: 42, 117-20 [NB 0233016]. • Roller & Goodman, *Catalogue*, 1976: 1, 92. • Wellcome Catalog (Books): 2, 125.

German Editions

445. German transl., 1680: Chymisches | Laboratorium, | Oder | Unter=erdische | Naturkündigung/ | Darinnen enthalten wird | I. Die tieffe Zeugung derer unter=erdischen Dinge: Wie | auch der wunderbare Bau der ober= und unter=erdischen | Erd=Wasser= und Luft=Kugel: Und dann die absonder= | liche

Natur der unter=erdischen Dinge Aufloß= und | Zulegung in ihre Theile/ | und derselben Eigenschaft. | II. Neue Chymische Proben/ einiger künstlichen gleich | darstelligen Verwandlung derer Metallen/ nach An= | leitung der in vorigen Jahren in Druck gegebenen | Physica Subterraneæ. | III. Ein nochmaliger Zusatz und Philosophischer Beweis= | thum/ derer Chymischen/ die Wahr= und Möglichkeit | derer Metallen Verwandlung in Gold/ bestreitenden | Lehr=Sätze. | IV. Ein Chymischer Rätseldeuter/ derer verdunkelten | Wort=Sätze Urhebung und Geheimnisse offenbahrend | und auflösend. | Wie soches alles durch fleissige Untersuchung | aufgefertiget | Joh. Joachimus Becherus, | von Speyer/ der Artzney Doctor, | Nunmehr aber auff Begehren der Artzney, | und Chymiae=Liebhabern in Druck | übergeben hat. | [rule] | Franckfurt/ | Gedruckt und verlegt durch Johann Haaß/ | Im Jahr M DC LXXX.

8^o: [30], 732 (i.e., 734) p.; 192, 175 (i.e., 173) p., [14], 156, [4] p.

VERY RARE. A translation of *Auctorvm laboratorii chymici monacensis, seu Physicæ Subterraneæ libri duo* (2nd ed., Francofuti, 1681) with the inclusion of translations of the first two supplements and some additional material on alchemy. The translator was Becher. The long dedication to the Emperor Leopold I, dated 20 March 1675, gives a history of alchemy. The work was probably written in support of his unsuccessful attempt to extract gold from the sand of the Danube. This is probably the rarest of Bechers writings, unknown to many bibliographers.

REFERENCES: NUC: 42, 117-20 [NB 0232967]. • VD17: 39:117000T. • Ward & Carozzi, *Geology Emerging*, 1984: no. 157.

446. — German, 1690.

Chymisches Laboratorium, oder Unter-erdische Naturkündigung ... Wie solches alles durch fleissige untersuchung aussgefertiget Joh. Joachimus Becherus ... Frankfurt, P. Fievet, 1690.

8^o: [28], 732, 175, [15], 192, 156, [4] p.

VERY SCARCE. A translation of *Auctorvm laboratorii chymici monacensis, seu Physicæ Subterraneæ libri duo* (Francofuti, 1681).

REFERENCES: LKG: XIII 59a. • NUC: 42, 117-20 [NB 0232969]. • VD17: [no copy listed].

447. — German, 1723.

D. Joh. Joachim Bechers/ | Röm. Kayserl. Maj. Rat rc. | Mineralisches | A B C. | Oder Vier und Zwanzig | Chymische Theses | von der Geburt/denen Principiis, | Unterschied/ Vermischung/ und Aufloß= | sung deren Mineralien, Metallen, und übri= | gen Unterirrdischen Dingen rc. | Aus dem Lateinischen ins Teutsche | übersetzt. | Nun aber auf vieler Begehren zum | Druck befördert | Durch | Friederich Roth-Scholtzen/ Siles. | [double rule] | Nürnberg und Altdorff/ | bey Johann Daniel Taubers seel. Erben/ | Anno 1723.

8^o: A7 B-I8; 75L.; [1]-150 p., frontispiece (portrait of Becher).

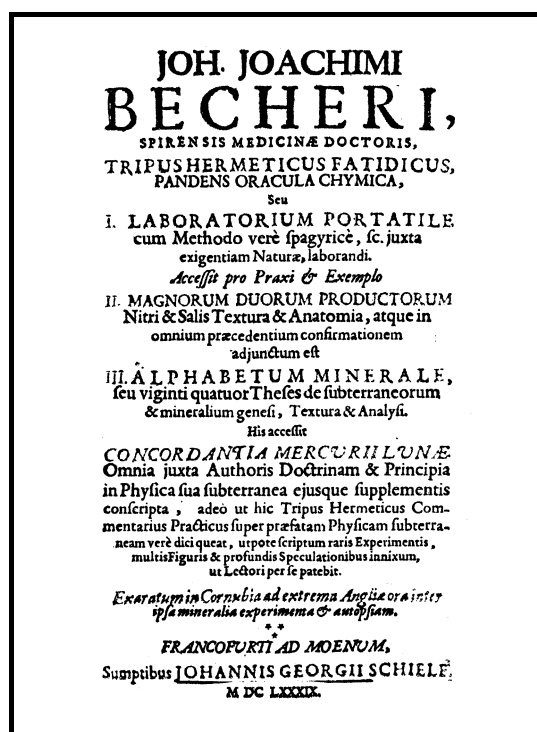
CONTENTS: [1-2], Title page, verso blank.; [3-6], "Geneigter Leser."; 7-12, Dedication to Robert Boyle.; 13-16, "Vorrede and den Leser."; 17-150, Text.

RARE. Translation by Friederich Roth-Scholtz [see note below] of *Alphabetum Minerale* (1st ed.,

Frankfurt, 1682). The work was intended to supplement and clarify the first supplement of Becher's *Physica Subterranea* (Frankfurt, 1671). Written while the author was learning mining techniques in Cornwall, this is a dictionary of mining and mineralogical terms. The work is dedicated to ROBERT BOYLE.

Friederich Roth-Scholtz. (BORN: Herrnsstadt, Bavaria, Germany, 17 September 1687; DIED: Nuremberg, Germany, 15 January 1736) *German bookseller.* Bookseller and librarian, Rothsoltz compiled a large personal library of books, especially in chemistry, alchemy, and some mineralogy.

REFERENCES: Cole, *Chemical Literature*, 1988: no. 66. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 59. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 86-90. • Fulton, *Bibliography of Robert Boyle*, 1961: Supplement, [Last Page?]. • NUC: 42, 117-20 [NB 0232994]. • Partington, *History of Chemistry*, 1961-70: 2, 642, no. VIII [incorrectly calls it 12mo.]. • Wellcome Catalog (Books): 2, 126. (Roth-Scholtz) ADB: 29, p. 346-348. • DBA: I 1059, 195-204. • WBI.



TRIPUS HERMETICUS FATIDICUS, 1689

448. — Latin, 1689 [First edition].

[In black:] Joh. Joachim | [in red:] Becheri, |
[in black:] Sirensis Medincinæ Doctoris, | [in
red:] Tripus Hermeticus Fatidicus, | [in black:]
Pandens Oracula Chymica, | Seu | [in red:]
| I. Laboratorium Portatile | [in black:] cum
Methodo verè spagyricè, sc. juxta | exigentiam
Naturæ, laborandi. | Accessit pro Praxi &
Exemplo | [in red:] II. Magnorum Duorum

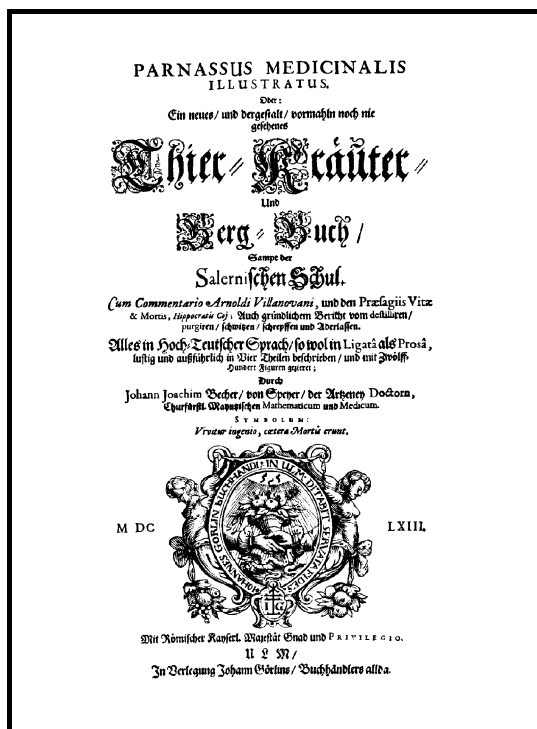
Productorum | [in black:] Nitri & Salis Textura
& Anatomia, atque in | omnium præcedentium
confirmationem | adjunctum est | [in red:] III.
Alphabetum Minerale, | [in black:] seu viginti
quatuor These de subterraneorum | & mineralium
genesi, Textura & Analyfi. | His accessit |
[in red:] Concordantia Mercvrllynæ | [in black:]
Omnia juxta Authoris Doctrinam & Principia |
in Physica sua subterranea ejusque supplementis
conscripta, adeo ut hic Tripus Hermeticus Com-
mentarius Practicus super præfatam Physicam
subterra- | neam verè dici queat, utpote scriptum
raris Experimentis, multis Figuris & profundis
Speculationibus innixum, | ut Lectori per se
patebit. | [in red:] Exaratum in Cornubia ad
extrema Angliæ ora inter | [in black:] ipsa miner
alia experimenta & autopsiam. | [ornament] |
Frankofvrti Ad Moenvm, | [in red:] Sumptibus
Johannis Georgii Schiele | [in black, rule] | M DC
LXXXIX.

8°: A7 B-M8 N4; 99l.; [1]-186, [12] p.

CONTENTS: [1-2], Title page, verso blank.; 3-6,
Dedication to Edmund Dickinson.; 7-9, Preface.; 10-24,
"Prolegomena Nonnulla."; 25-30, "Occasio Inventionis Hu-
jus Furni."; [31], Sectional title page, "Joh. Joachimi |
Becheri, Spirensis Medic. Doct. | Scyphus Becherianus |
Sive | Laboratorium | Portatile, | Quo Omnes Labores
Chy- | mici Excogitabiles et Practicabi- | les Levi Sumtu,
Brevi Tempore, | Jucunda Operatione Elabo- | Rari
Possunt. Accessit Ejusdem Metho- | dvs Vera Et Genuina
Phi- | losopice Et Spagy- | rice Laborandi. | Plutarch.
| Instrumenti cujusvis laus est, ut sit expedi- | tum &
facile."; Text of Laboratorium Portatile.; Sectional title
page, "II. | Joh. Joachimi Becheri, | Spirensis Medic. Doct.
| Centrum Mundi Concatenatum, | Seu Duumviratus
| Hermeticus, | Sive Magnorum Mundi Duorum |
Productorum. | Nitri & Salis Textura & Anatomia. |
Aeris nempe & Maris Consideratio. | Pro Commentario |
In Posteriora Dvo Capita | Supplementi Primi Physicæ
| Sive Subterraneæ. | Hermes. | Quodcunque superius
est, simile est ei, quod | est inferius."; 65-67, Dedication.;
68-70, Preface.; 71-97, Text of Duum Viratus Hermeticus.;
[98], Sectional title page, "III. | Alphabetum | Minerale, |
Seu | Viginti Qua- | tuor These Chymicæ De | Mineralium,
Metallorum | Coeterorumque Subterra- | neorum Genesi,
Principiis, | Differentiis, Mixtione Et | Solutione. |
Cornubiæ in Anglia inter ipsas multifarias | mineras
earumque examinationes, autopsia & pra- | xi congestæ
& demonstratæ juxta principia | Philosophica | Physicæ
Subterraneæ Doct. Becheri, | Truro Anno 1682."; 99-101,
Dedication to Robert Boyle.; 102-103, Preface.; 104-149,
Text.; 150-182, Text of Concordantia Mercuriorum Lunæ.;
183-186, Text of Concordantia Menstruorum.; [8 pgs],
Subject index.; [1 pg], Errata.; [1 pg], Blank.; [1 pg],
Instructions to the binder.; [1 pg], Blank.

RARE. While visiting the mines of Cornwall, Becher wrote these works, the *Laboratorium Portatile* at Falmouth and the *Alphabetum Minerale* at Truro. The year and place imprinted on the sectional title page of this third section represents its year of composition not publication.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 57. • Mellon, *Alchemy and the Occult*, 1968-77: no. 141.



THEIR- KRÄUTER- UND BERG-BUCH, 1663

449. — German, 1663.

Parnassus Medicinalis | Illustratus. | Oder: | Ein neues/ und dergestalt/ vormahln noch nie | geschenes | Their= Kräuter= | Und | Berg=Buch/ | Sampt der | Salernischen Schul. | Cum Commentario Arnoldi Villanovani, und den Præsagiis Vitæ | & Mortis, Hippocratis Coj; Auch gründlichern Bericht vom destilliren/ | purgiren/ schwitzen/ schrepssen und Aberlassen. | Alles in Hoch=Teutscher Sprach/ so wol in Ligatâ als Prosâ, | lustig und außführlich in Vier Theilen beschrieben/ und mit Zwölff= | Hundert Figuren gezieret; | Durch | Johann Joachim Becher/ von Speyer/ der Artzeney Doctorn, Churfürstl. Maynsischen Mathematicum und Medicum. | Symbolem: | Vivitur ingenio, cætera Mortù erunt. | M DC [ornament] LXIII. | Mit Römischer Kayserl. Majestât Gnad und Privilegio. | Ulm/ | In Verlegung Johann Gõrlins/ Buchhändlers allda.

4 parts in one volume. [Part 1] 2°: A-I⁶ K⁴; ??ℓ.; [12], [1]-104 p. [Part 2] 2°: A-Fff⁶ Ggg⁴; ??ℓ.; [1]-632 p. [Part 3] 2°: a-g⁶ h²; ??ℓ.; [1]-88 p. [Part 4] 2°: A-N⁶ O⁴)-()⁽⁶⁾)-()⁽²⁾; ??ℓ.; [1]-164, [28] p. About 1200 illustrations are included in the text. Originally issued in 4 parts, each with its own title page, all of which bear the date 1662.

CONTENTS: [Part 1] [2 pgs], Engraved Title page, dated 1663, verso blank.; [2 pgs], Title page, verso

blank.; [2 pgs], Dedication to Johann Shilipsen.; [4 pgs], "Vorrede."; [2 pgs], "Auslegung deß Kupfer-Tituls ..."; [1], Sectional title page, "Zoologia."; [2], Blank.; [3], "Eingang zu dem Ersten Theil."; [4], "Vorrede."; [5]-94, Text.; 95-104, "Beschluß über die | Zoologie."

[Part 2] [1], Sectional title page, "Phythologia."; [2], Blank.; 3, "Eingang zu dem andern Theil..."; 4, "Vorrede | ... | Kräuter=Buch."; 5-629, Text.; 630-632, "Beschluß über die | Phythology."

[Part 3] [1], Sectional title page, "Mineralogia."; [2], Blank.; 3, "Eingang zu dem Dritten Theil..."; 4, "Vorrede | ... | Berg=Buch."; 5-88, Text.

[Part 4] [1], Sectional title page, "Schola."; [2], Blank.; [3], "Eingang zu dem Vierdten Theil."; [4], "Vorrede über deß erläuterten."; 5-152, Text.; 163-164, "Beschluß über den Vierdten Theil."; [28 pgs], Recommendations and indexes to all four parts.

RARE. This is a description of the three realms of nature and their use in medicine. The first part describes the animal kingdom, beginning with man, followed by the beasts, birds, insects, lizards, etc. The second part is a botanical herbal that utilizes reworked illustrations from the earlier herbal of Mattioli. The third section is concerned with objects yielded by the earth including mineral resources, mines, minerals, fossils, stones, etc. Within the mineralogy section are descriptions of individual mineral types including petroleum, mercury, native metals, crystals, sulfur, coal, saltpeter, pyrite, arsenic, antimony, etc. The fourth section concerns the purposes to which nature can be put for the medical good of mankind and includes a section on distillation processes. A comprehensive index to all the parts is found at the book's conclusion. The text is heavily illustrated throughout but most particularly in the sections on animals and plants.

Facsimile reprint, 1957: *Parnassus medicinalis illustratus, oder Ein neues, und dergestalt, vormahln noch nie gesehenes. Their-Kräuter- und Berg-Buch, sampt der Salernischen Schul Cum Commentario Arnoldi Villanovani ...* 1663. Ulm/Donau, K.F. Haug, 1957. 104, 632, 88, 164 p., illus. This facsimile reprint was limited to 300 copies.

REFERENCES: BL. • NUC.

450. — Latin, 1664.

Institutiones chimicae prodromae i.e. Ioannis Ioachimi Becheri ... Oedipus chemicus obscuriorum terminorum & principiorum chemicorum mysteria aperiens & resolvens. Opusculum, omnibus medicinae & chimiae studiosis, lectu perquàm utile & necessarium Francofvrti, apud Hermannvm à Sande, 1664.

12°:):(⁶ A-H¹²; 102ℓ.; [16], 192, [7] p. 2 plates (engraved). Title vignette, "Errata," p. [199]. RARE.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 55. • Hoover Collection: no. 109.

BECHER, Johann Philipp.

REFERENCES: ADB. • DBA: I 68, 257-262. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, col. 125. • WBI.

451. — German, 1787.

Mineralogische Beschreibung des Westerwalds, insbesondere der beiden Holzkohlen-Bergwerke, zu



MINERALOGISCHE BESCHREIBUNG, 1789

Stockhause und Hoen. Berlin, [1787].

8°: [1]-118 p., one plate, petrographic map[?].

RARE. Originally published by Becher as an article, "Mineralogische Beschreibung des Westerwalds, insbesondere der beiden Holzkohlen-Bergwerke, zu Stokhausen und Hoen," *Schriften der Berlinischen Gesellschaft naturforschender Freunde*, 7, no. 1, pp. 1-118. The text may have been issued separately with a new title page. This is a mineralogical description of the region of Westerwalds.

REFERENCES: BL. • BMC: 1, 118. • LKG: XIV 277. • NUC: [no copy listed].

452. — German, 1789.

Mineralogische | Beschreibung | der |
Oranien=Nassauischen Lande | nebst einer |
Geschichte | des | Siegenschen Hütten= und
Hammerwesens. | [rule] | Von | Johann Philipp
Becher, | [...2 lines of titles and memberships...] |
[vignette] | Mit 4 Kupfern. | [rule] | Marburg | in
der neuen akademischen Buchhandlung. 1789.

8°: [20], 624, [4] p., 4 colored maps.

VERY SCARCE. Description from a mineralogical viewpoint of the minerals, ores, rocks and geological formations of the Oranien-Nassauian region of Germany, including descriptions of limestone, porphyry, gneiss, granite, basalt, lava, etc. Becher also provides a history of metallurgy and manufacturing in the area.

Facsimile reprint, 1976: *Mineralogische Beschreibung der Oranien-Nassauischen Lande nebst einer Geschichte*

des Siegenschen Hütten- und Hammerwesens. Kreuztal (Wielandschmiede) 1976. 624 p.

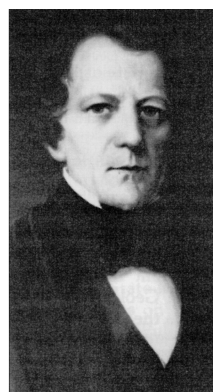
REFERENCES: Bartels, *Geologie und Bergbau*, 1996: no. 56. • LKG: XIV 278a. • NUC: 42, 120 [NB 0233026].

453. Reprint, 1902: *Mineralogische Beschreibung der Oranien-Nassauischen Lande nebst einer Geschichte des Siegenschen Hütten- und Hammerwesens. Zweite Auflage* (die erste erschien 1789). Dillenburg, M. Weidenbach, 1902. 8°: viii, 326 p., 4 maps. VERY SCARCE.

REFERENCES: BMC: 1, 118 & 6, 69. • NUC: 42, 120 [NB 0233027].

Orographische Briefe über das Siebengebirge und die benachbarten zum Theil vulkanischen Gegenden beyder Ufer des Nieder-Rheins an Herrn Joseph Paul Edeln von Cobres von Carl Wilhelm Nose. (Frankfurt am Mayn, 1789-91, 3 vols.).

See: Nose, Karl Wilhelm.



BECK

BECK, Lewis Caleb. (BORN: Schenectady, New York, U.S.A., 4 October 1798; DIED: Albany, New York, U.S.A., 20 April 1853) *American physician, naturalist & chemist.*

Brother of the physicians John B. Beck [1794-1851] and Theodric R. Beck [1791-1855], Lewis Beck graduated from Rutgers College in 1817. In 1830, he was appointed a professor of chemistry at Rutgers. In 1836, Beck became the mineralogist for the geological survey of New York. In 1840, he was named professor of chemistry at Albany Medical College. He authored many works on botany, chemistry and food adulteration.

REFERENCES: ABA: I 95, 140-168, 247-248; II 37, 429-430, 454. • *American Chemists & Chemical Engineers*: 1, 26-7 [by W.D. Miles]. • *American Journal of Science*: 2nd Series, 66 (1853), 149-50. • Barr, *Index to Biographical Fragments*, 1973: 18. • Cleavelly, *World Palaeontological Collections*, 1983: 51. • DAB: 2, 116 [by L.F. Kebler]. • Drake, *Dictionary of American Biography*, 1872: 76. • Elliott, *Biographical Index*, 1990: 18. • Elliott, *Biographical Dictionary*, 1979: 28. • Fruton, *Bio-Bibliography*, 1982: 46. • Herringshaw's *National Library of American Biography*. • *ISIS*, 1913-65: 1, 122. • Kebler, L.F., "A pioneer in pure foods and drugs—Lewis C. Beck," *Industrial Engineering and Chemistry*, 16 (1924), 968-70. • Kelley & Burrage, *American Medical Biography*, 1928: 86. • *National Cyclopaedia of American Biography*: 2, 538-40. • NY Academy Portrait Catalog: 1 [one portrait listed]. • Pogendorf: 1, cols. 125-6 & 1534. • *Popular Science Monthly*: 73 (1908), 488-99. • Thomas, *Dictionary of Biography*, 1884: 306. • *Transactions of the Medical Society, Albany, NY (Albany Medical Annals)*: 1 (1864), 292-302 [by C.E. Van Cortlandt]. • WBI. • *World Who's Who in Science*: 138. • WWAH: 45.

454. — English, 1842.

Mineralogy | Of | New-York; | Comprising Detailed Descriptions Of The Minerals Hitherto Found In The State Of | New-York, And Notices Of Their Uses In The Arts And Agriculture. | [short rule] | By Lewis C. Beck, M.D. | Professor of Chemistry and Natural History in Rutgers College, New-Jersey. | [short rule] | Albany: | Printed By W. & A. White & J. Visscher. | [short rule] | 1842.

4°: [A]³ B⁴ C² D⁴ 1-774 (\$1 signed); 285*l.*; [2], [i]-xxiv, [2], [1]-536, [4] p., 8 plates. PAGE SIZE: 300 x 250 mm.

CONTENTS: [2 pgs], Series title page, "Natural History | Of | New York," verso blank.; [i-ii], Title page, verso blank.; [iii], Copyright notice, signed Samuel Young, 1842.; [iv], Blank.; [v], Dedication to William H. Seward, signed Lewis C. Beck, November 1, 1842.; [vi], Blank.; [vii]-xiii, "Preface."; [xiv], Blank.; [xv]-xvii, "List of the Principal Works Referred To In This Volume."; [xviii], Blank.; [xix]-xxiv, "Contents."; [1 pg], "Part I. Economical Mineralogy."; [1 pg], Blank.; [1]-167, Text.; [168], Blank.; [169], "Part II. Descriptive Mineralogy."; [170], Blank.; [171]-445, Text.; [446], Blank.; [447]-457, "Catalogue of American Minerals, not hitherto found in the state of New-York; with short descriptions, localities, &c."; [458], Blank.; [459], "Tables of Crystalline Forms."; [460]-525, "Tables of the Crystalline Forms Introduced into the Descriptive Part of This Work."; [526], Blank.; [527]-536, "Index."; [1 pg], "Errata."; [1 pg], Blank.; [1 pg], "Explanation Of Additional Plates."; [1 pg], Blank.; [At end], 8 plates.

SCARCE. One of the earliest systematic description of minerals of New York (the first being Webster, *Catalogue of the Minerals*, 1824), published as the third volume of a general natural history of the state. It is rich in locality information, with an extensive bibliography, an extensive examination of economic mineral deposits (iron, sulfide, copper ores, etc.) and a very detailed descriptive mineralogy (pp. 171-525), of which pages 459-525 are plates of crystal drawings.

Facsimile reprint, 1987: Special Publication #2 of the Rochester Mineralogical Symposium, 1987. No new material was added to this reprint.

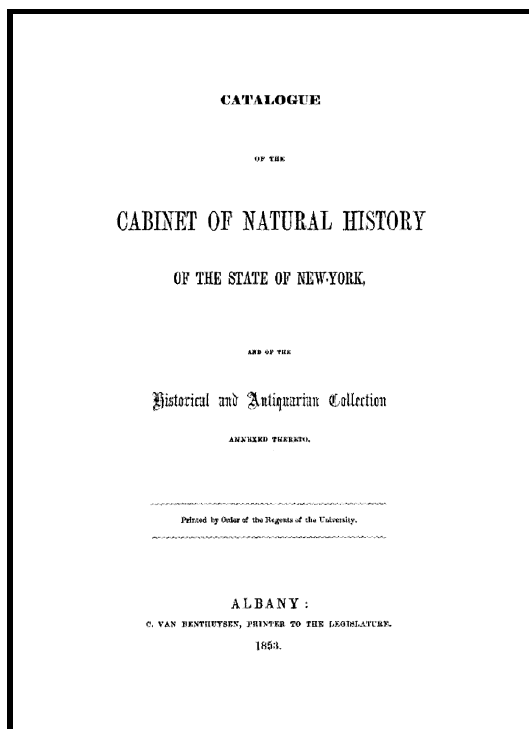
REFERENCES: BMC: 1, 119. • Dana's 7th (Bibliography): 66. • Ward & Carozzi, *Geology Emerging*, 1984: no. 159.

455. — English, 1853 [Collection catalog].

Catalogue | of the | Cabinet Of Natural History | Of The State Of New-York, | and of the | Historical and Antiquarian Collection | annexed thereto. | [wavy rule] | Printed by Order of the Regents of the University. | [wavy rule] | Albany: | C. Van Benthysen, Printer To The Legislature. | 1853.

4°: [1]-34, [2], [1]-61, [1], [1]-22, [1]-53, [1], [1]-31, [1], [1]-28, [1]-22 p. (=251 p., in various pagings).

CONTENTS: [1-2], Title page, verso blank.; [3], "Regents of the University, 1853."; [4], Blank.; [5], "Memorandum."; [6], Blank.; [7], "Table of Contents."; [8], Blank.; [9], Sectional title page, Zoology of New-York.; [10], Blank.; [11]-34, Text of zoology.; [1 pg], Sectional title page, Fishes of New-York.; [1 pg], Blank.; [1], Sectional title page, Botany of New-York.; [2], Blank.; [3]-61, Text of botany.; [1 pg], Blank.; [1], Sectional title page, Mineralogy of New-York.; [2], Blank.; [3]-22, Text of mineralogy.; [1],



CATALOGUE, 1853

Sectional title page, Geology of New-York.; [2], Blank.; [3]-53, Text of geology.; [1 pg], Blank.; [1], Sectional title page, Palaeontology of New-York.; [2], Blank.; [3]-31, Text of palaeontology.; [1 pg], Blank.; [1], Sectional title page, Historical and Antiquarian Collections.; [2], Blank.; [3]-28, Text.; [1], Sectional title page, Collection of the late H. Casimir De Rham, Jr.; [2], Blank.; [3]-22, Catalog of the collection, consisting of birds, mammals, fossils and shells.

VERY SCARCE. Supplement to the *Natural History of New-York*, this set of texts catalogs various specimens discovered and deposited at the University in Albany during the various expeditions. The contents of the volume are as follows: Zoology, by J. E. DeKay. – Botany, by J. Torrey. – Mineralogy, by L. C. Beck. – Geology, by W. W. Mather, E. Emmons, L. Vanuxem and J. Hall. – Paleontology, by J. Hall. – Historical and antiquarian collection. – Collection of the late H. C. DeRham, jr.

The mineralogical collection catalog was prepared by Beck in 1848, and includes on the last page a list of species found in the state since the publication of his *Mineralogy of New-York* (Albany, 1848).

REFERENCES: BMC: 1, 119.

BECK, W.**456. — German & Russian, 1890 [Dictionary].**

Deutsch-Russisches Wörterbuch der Bergbau- und Hüttenkunde. Enthaltend die gebräuchlichsten technischen Wörter aus der Metallurgie, Bergbaukunde, Markscheidkunst, Probirkunst, Salinenkunde, Geologie, Mineralogie, Chemie, Physik,

BECKENKAMP

Mechanik, Gäodesie, Baukunde und die Eisenbahnwesens. Buchdruckerei det Kaiserlichen Akademie des Wissenschaften, St. Petersburg, 1890.

4°: viii, 496 p. The title page is also present in Russian.

RARE. A largely unknown German-Russian dictionary of mining and manufacturing containing the technical terms used in mining, metallurgy, machining, assaying, salt-science, geology, mineralogy, chemistry, physics, mechanics, construction and railroading.

REFERENCES: BL: [W30/6720 DSC].

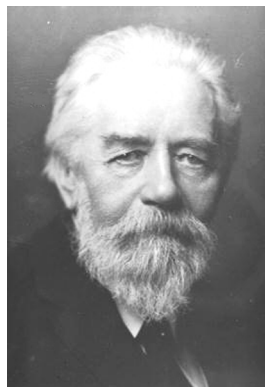
BECK, Walter F.

457. — **English, 1897** [Sale catalog].

Catalogue of the museum of minerals, curios, and antiques collected ... by Col. Walter F. Beck of Oakland, California ... to be sold at public auction Tuesday, March 30, 1897 ... San Francisco, Schmidt, 1897.

8°: 42 p. "Original ores by which the Comstock Lode was assayed by G. Bell, from 1862-1866." VERY RARE.

REFERENCES: NUC.



BECKE

BECKE, Friedrich Johann Karl. (BORN: Prague, Czechoslovakia, 31 December 1855; DIED: Vienna, Austria, 18 June 1931) *Czech/Austrian mineralogist.*

Becke studied mineralogy at Vienna under Tschermak and Schrauf, graduating in 1880. In 1882, he became professor of mineralogy at the University of Czernowitz [now Cernăuți, Romania], and in 1890, at the German University at Prague. In 1898, he succeeded A. Schrauf at the University of Vienna, and later, G. Tschermak, retiring in 1927. Becke was an expert and pioneer in optical mineralogy, and from 1899, he acted as editor of *Tschermak's Mineralogische und Petrographische Mitteilungen*. He won the Wollaston Medal of the Geological Society of London in 1929.

REFERENCES: *American Mineralogist*: 17 (1932), 226-7. • *C.R. Acad.Sci., Paris*: 193 (1931), 553-5. • DBA: II 85, 353-377. • DSB: 1, 551-2 [by H. Baumgärtel]. • Freund & Berg, *Geschichte der Mikroskopie*, 1966. • *Geologiska Föreningens i Stockholm Förhandlingar*: 1931, 329-37. • La Rocque, *History of Geology*, 1964: 1, 14-5 [by R.E. Metter]. • *Mineralogical Magazine*: 23 (1932), no. 141, 341-2, portrait. • *Mitteilungen der Geologische Gesellschaft in Wien*: 24 (1931), 137-46. • *Nachr.Ges.Wiss. Göttingen, Mitt.*: 1931-2, 70-3. • NDB: 1,

708-9 [by W. Fischer]. • Poggendorff: 4, 83-4 & ??? . • Sarjeant, *Geologists*, 1980: 2, 517-8, Suppl. 1(1986), 1, 281 & Suppl. 2 (1995), 1, 424. • Tertsch, H., "Erinnerungen an Friedrich Becke. Festschrift zur Enthüllung des F. Becke-Denkmales in den Arkaden der Wiener Universität am 18 Juni, 1956," *Mitt. öst. miner. Ges. Sonderh.*, no. 4, 32 p. • *Tschermak's mineralogische und petrographische Mitteilungen*: 42 (1932), i-viii. • WBI. • *World Who's Who in Science*: 139.

Tschermak's Mineralogische- und Petrographische Mitteilungen herausgegeben von F. Becke. (Neue Folge.)

See: **Tschermak's Mineralogische.**

Lehrbuch der Mineralogie ... Siebente ... Auflage. Bearbeitet von F. Becke. (??, 1915).

See: **Tschermak-seysenegg, Gustav Von.**

Mineralogisches Lexicon für das Kaiserthum Österreich. III. Band. ... Nach des Autors hinterlassenen Manuscripte bearbeitet von F. Becke, &c.

See: **Zepharovitch, Victor Leopold, Ritter Von.**

BECKENKAMP, Jakob. (BORN: Horcheim near Coblenz, Germany, 20 February 1855; DIED: Würzburg, Germany, 12 January 1931) *German mineralogist.*

In 1872, Beckenkamp helped as a surveyor in remapping the Wiesbaden district of Germany. From 1876-9, he entered the University of Bonn, where he studied mathematics, physics and chemistry. Afterwards, he attended the University of Strasbourg, where he studied crystallography under P. GROTH, graduating 1881. Beckenkamp worked for a time on a geological survey of Elsass-Lothringen, but in 1897, he became professor of mineralogy and geology at the University of Würzburg, from which he retired in 1929. His principle research was on physical crystallography dealing with thermal, elastic, magnetic and electrical properties of crystals.

REFERENCES: *Centralblatt für Mineralogie*: Series A (1931), 257-69 [by E. Schiebold]. • DBA: II 86, 7-18. • *Mineralogical Magazine*: 23 (1933), no. 141, 342-3. • NDB: 1, 710 [by W. Fischer]. • Poggendorff: 4, 84-5 & ??? . • Sarjeant, *Geologists*, 1980: 2, 518. • WBI. • *World Who's Who in Science*: 139.

458. — **German, 1913-5.**

Statische und kinetische | Kristalltheorien | von | Dr. J. Beckenkamp | [...2 lines of titles and memberships...] | [rule] | Erster Teil | Geometrische Eigenschaften der Kristalle | und deren | Veranschaulichung durch geometrische Strukturbilder | Mit 303 Textabbildungen. | [rule] | Berlin | Verlag von Gebrüder Borntraeger | W35 Schöneberger Ufer 12a | 1913.

[TITLE OF PART 2 READS:]

Statische und kinetische | ... | Zweiter Teil | Theorie der Ausbreitung der Energie in Kristallen durch Strahlung | (Kristalloptik) | und | Veranschaulichung der optischen Eigenschaften der kristallisierten | Kieselsäure durch statische Strukturbilder | Mit 487 Textfiguren und 7 Stereoskopbildern | [rule] | ... | 1915.

2 vols. [VOL 1] 8°: [i]-viii, [1]-206, [2] p., 303 illus.; [VOL 2] 8°: [i]-xii, [1]-670, [2] p., 487 illus., in back pocket, 7 stereo plates depicting atomic structures in crystals. PAGE SIZE: 242 x 154 mm.

CONTENTS: [Vol 1] [i-ii], "J. Beckenkamp | Statische und kinetische | Kristalltheorien," verso blank; [iii-iv], Title page, verso "Alle Rechte, | ..."; [v]-



KRISTALLTHEORIEN, 1913

vi, "Vorwort"—signed J. Beckenkamp, November 1912.; [vii]-viii, "Inhaltsverzeichnis."; [1]-206, Text.; [2 pgs], Advertisements.

[Vol 2] [i-ii], Half title page, "J. Beckenkamp | Statische und kinetische | Kristalltheorien," verso blank.; [iii-iv], Title page, verso "Alle Rechte, | ..."; [v]-vi, "Vorwort"—signed J. Beckenkamp, August 1915.; [vii]-xii, "Inhaltsverzeichnis."; [1]-646, Text.; [647]-670, Name and subject indexes.; [1 pg], Errata.; [1 pg], Advertisements.

SCARCE. A comprehensive treatise, providing extensive discussion of the most current knowledge of crystallography. The first part covers the 'static' properties of crystals and theoretical discussions of the internal geometric structure. Included in this portion are discussions of previous theories including Haüy, Weiss, Hessel, notational systems, twins, pseudomorphs, thermal, elastic, magnetic and electrical properties of crystals, etc. The second part details 'kinetics' of crystals, or their behavior when interacting with light or other forms of radiation. Discussion includes crystal optics, with historical perspectives, goniometers, physical properties, theories of the arrangements of atoms within crystals, also touching on the recent discoveries of Von Laue and Bragg in X-ray crystal diffraction analysis. At the conclusion are comprehensive indexes to both parts.

REFERENCES: Dana's 7th (Bibliography): 66. • *Mineralogical Magazine*: 19 (1922), 115 [by L.J. Spencer].

459. — German, 1919.

Leitfaden der Kristallographie | von | Dr. J. Beckenkamp | [...2 lines of titles and memberships...]

| [rule]Mit 549 Textabbildungen | [rule] | Berlin | Verlag von Gebrüder Borntraeger | W35 Schöneberger Ufer 12a | 1919.

8°: [i]-xii, [1]-466, [2], 1-12 p., 549 illus. PAGE SIZE: 240 x 154 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, | ..."; [iii]-v, "Vorwort."—signed J. Beckenkamp, January 1919.; [vi], Blank.; [vii]-xii, "Inhaltsverzeichnis."; [1]-448, Text.; [449]-466, "Sachregister."; [1 pg], "Anzeigenanhang."; [1 pg], Contents of the the following advertisements.; 1-12, Advertisements for various equipment manufacturers.

SCARCE. This *Manual of Crystallography* is more or less an abridgement of the author's *Statische und Kinetische Kristalltheorien* (Berlin, 1913-5), omitting almost all of the historical perspective. Divided into six parts, this is a superb introduction to crystallographic science, however. In the first portion, Beckenkamp covers in detail the cubic, tetragonal, rhombohedral, monoclinic, triclinic and hexagonal systems, with descriptions of the crystal classes that occurs under each heading. The second part describes dielectric and magnetic phenomena that result from atomic arrangements within some crystals. The third section describes how piezo- and pyro-electrical properties occur by either rubbing or heating certain mineral crystals. A fourth section (pp. 141-278) describes optical properties of crystals, including reflection, interference patterns, double refraction, polarization, luminescence, etc. The fifth part (pp. 279-330) describes the influence of mechanical, thermal and chemical properties on the geometric and physical properties of crystals. The sixth and final section (pp. 331-443) covers structural theory and how it affects the geometric and physical properties of crystals. An errata to the author's previous *Statische und Kinetische Kristalltheorien* and a comprehensive subject index help conclude the work.

REFERENCES: *Mineralogical Magazine*: 19 (1922), 115 [by L.J. Spencer].

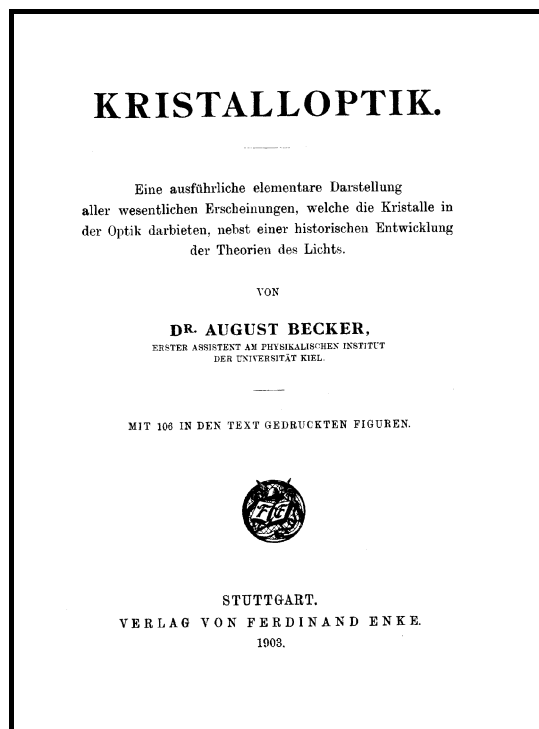
BECKER, August. (BORN: Osterburken, Baden, Germany, 19 February 1879; DIED: Heidelberg, Germany, 16 January 1953) *German physicist & crystallographer.*

In 1901, Becker received his Ph.D. from Heidelberg, where he had studied since 1897. From 1901 to 1907, he was an assistant at the Physical Institute in Kiel. But in 1907, he returned to Heidelberg, becoming professor extraordinary of theoretical physics. In 1935, Becker was appointed professor of physics and director of the Philipp Lenard Institute at the University of Heidelberg.

REFERENCES: DBA: II 86, 90-96. • Poggendorff: 5, 80, 6, 154-5 & 7a, Teil 1, 116-7. • WBI.

460. — German, 1903.

Kristalloptik. | [rule] | Eine ausführliche elementare Darstellung | aller wesentlichen Erscheinungen, welche die Kristalle in | der Optik darbieten, nebst einer historischen Entwicklung | der Theorien des Lichts. | Von | Dr. August Becker, | [...2 lines of titles and memberships...] | [rule] | Mit 106 In Den Text Gedruckten Figuren. | [ornament] | Stuttgart.



KRISTALLOPTIK, 1903

| Verlag Von Ferdinand Enke. | 1903.

8°: π^5 1-228 235; 186 ℓ .; [i]-x, [1]-362 p., illus.

PAGE SIZE: 216 x 140 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte vorbehalten."; [iii]-iv, "Vorwort."—dated January 1903.; [v]-x, "Inhaltsverzeichnis."; [1]-356, Text.; [357]-358, "Namenregister."; 359-362, "Sachregister."

SCARCE. An important book in crystal optics outlining the theories of all components of the study, together with numerous practical examples taken from the mineral kingdom. The text covers crystals, light, refraction and dispersion, polarization, reflection, double refraction. The principles of Huygens concerning light within a transparent body and Fresnel's theories are reviewed.

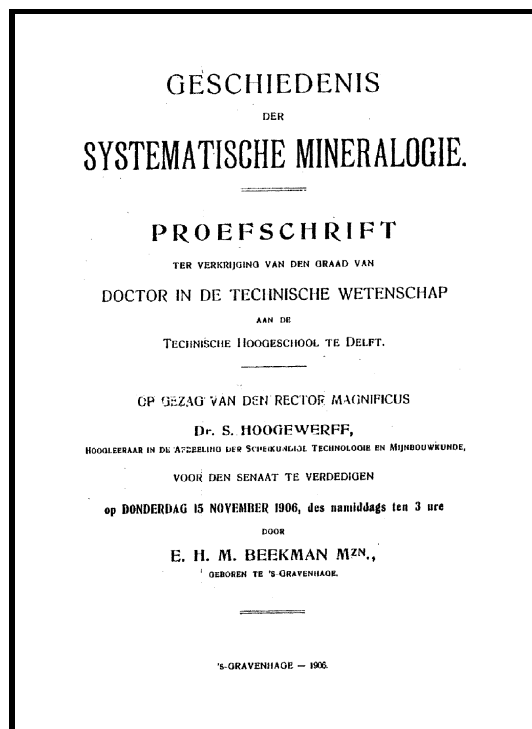
Contents: Allgemeines (pp. 1-11). I. Geradlinige Polarisation (pp. 12-24). II. Wellenflächen (pp. 25-48). III. Chromatische Polarisation (pp. 49-125). IV. Zirkulare und elliptische Polarisation (pp. 126-151). V. Drehung der Polarisationssebene (pp. 152-192). VI. Lamellare Polarisation (pp. 193-205). VII. Absorption in Kristallen (pp. 193-205). VIII. Reflexion des Lichts (pp. 206-242). IX. Optische Kristallanalyse (pp. 243-253). X. Polarisationsapparate (pp. 254-312). XI. Theorien des Lichts (pp. 313-356).

REFERENCES: BMC: 6, 70. • Dana's 7th (Bibliography): 66.

BEEKMAN, Egbert Hermann Michel. *Dutch mineralogist.*

461. — Dutch, 1906.

Geschiedenis | der | Systematische Mineralogie. | [double rule] | Proefschrift | ter verkrijging van den



GESCHIEDENIS DER SYSTEMATISCHE, 1906

Graad van | Doctor in de Technische Wetenschap | aan de | Technische Hoogeschool te Delft. | [rule] | Op Gezag van den Rector Magnificus | Dr. S. Hoogewerff, | Hoogleeraar in Afdeeling der Scheikunde en Mijnbouwkunde, | Voor de senaat te verdedigen | op Donderdag 15 November 1906, des namiddags ten 3 ure | door | E.H.M. Beekman Mzn., | geboren te 's-Gravenhage. | [double rule] | 's-Gravenhage — 1906. 8°: π^8 i-xiii⁸ χ^2 ; 114 ℓ .; [i]-xv, [1], 1-212 p. PAGE SIZE: 220 x 135 mm.

CONTENTS: [i-ii], Half title page, "Geschiedenis Der Systematische Mineralogie," verso blank.; [iii-iv], Title page, verso blank.; [v], Dedication to J.L.C. Schroeder van der Kolk.; [vi], Blank.; vii-viii, Preface [not titled].; ix-xi, "Inleiding."; [xii], Blank.; xiii-xv, "Litteraturopgave."; [1 pg], Blank.; [1]-203, Text.; 204-205, "Besluit."; 206-209, "Lijst Der Namen."; [210], Blank.; 211-212, "Stellingen."

RARE. A treatment of the development of systematic mineralogy. Beekman abstracts several hundred different mineralogical classification schemes from Theophrastus to the end of the 19th century, together with brief notes on the primary source books. A valuable compilation for those interested in the rise of systematic mineralogy.

REFERENCES: BMC: 6, 72. • Roller & Goodman, *Catalogue*, 1976: 1, 95.

BEHRENS, Georg Henning. (BORN: Goslar, Saxony, Germany, 5 June 1662; DIED: Nordhausen, Germany, 7 January 1712) *German physician.*



HERCYNIA CURIOSA, 1703

Berhens had a medical practice in Nordhausen.
REFERENCES: DBA: I 76, 36. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, cols. 135 & 1535. • WBI.

462. — German, 1703.

[In red:] Hercynia Curiosa, | oder | [in black:] Curiöser | [in black: H] [in red:] artz=[in black, W] [in red:] ald / | [in black:] Das ist | Sonderbahre | [in red:] Beschreibung und Verzeichnis | [in black:] Derer Curiösen | [in red:] Hölen / Seen / Brunnen / Bergen / | [in black:] und | vielen andern an= und auff dem Hartz vorhandenen | [in red:] Denckwürdigen Sachen | [in black:] mit unterschiedenen Nützlichen und Ergetzlichen | Medicinischen/ Physicalischen und Historischen | [in red:] Anmerkungen | [in black:] denen | Liebhabern solcher Curiositäten | zur Lust | herausgegeben | von | [in red:] D. Georg Henning Behrens, | [in black:] Physico Ordin. Subordin. in Nordhausen. | [rule] | Nordhausen/ | [in red:] Verlegts Carl Christian Neuenhahn/ Buch=Händler. | [in black:] 1703.

4^o:)⁽³ A-Dd4; 111l.; [6], [1]-200, [16] p., frontispiece (view of the town of Nordhausen). Title page in red and black. Head and tail pieces, initials. PAGE SIZE: 192 x 154 mm.

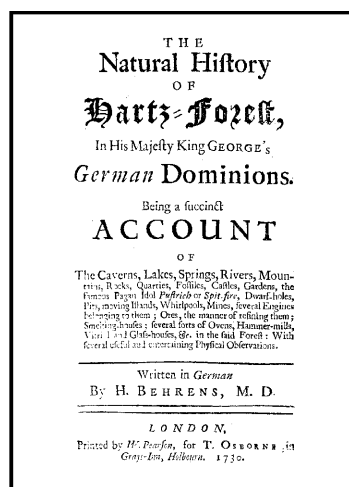
CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorrede."; 1-200, Text.; [16 pgs], "Register."

VERY SCARCE. A personal narrative of an excursion through northern Germany. The book is interesting for its account of the geology and fossil of the region, and also the author took a special interest in the mineral wealth of the region. Therefore, this work is principally a description of the various mines, quarries, and caves he chanced to visit. Of great value for reporting the state of the mining and metallurgy of the time. The text was reissued in an unaltered state in 1712 and again in 1720.

Reprint, 1712: Nordhausen, 1712. 4^o: [6], [1]-200, [16] p., title page in red and black.

Reprint, 1720: Nürnberg und Altdorff: J.D. Taubers, seel. erben, 1720. 4^o: [8], [1]-200, [16] p., title page in red and black.

REFERENCES: BL. • BMC: 6, 72 [wanting]. • LKG: XIV 155. • NUC: 43, 671 [NB 0262985].



NATURAL HISTORY, 1730

463. 1730: The | Natural History | Of | Hartz=Forest, | In His Majesty King George's | German Dominions. | Being a succinct | Account | Of | The Caverns, Lakes, Springs, Rivers, Moun- | tains, Rocks, Quarries, Fossils, Castles, Gardens, the | famous Pagen Idol Pustrich or Spit-fire, Dwarf-holes, | Pits, moving Islands, Whirlpools, Mines, several Engines | belonging to them; Ores, the manner of refining them; | Smelting-houses; several sorts of Ovens, Hammer-mills, | Vitriol and Glass-houses &c. in the said Forest: With | several useful and entertaining Physical Observations. | [rule] | Written in German | By H. Behrens, M.D. | [double rule] | London, | Printed by W. Pearson, for T. Osborne in | Grays-Inn, Holbourn. 1730. 8^o: [16], [1]-164, [12] p.

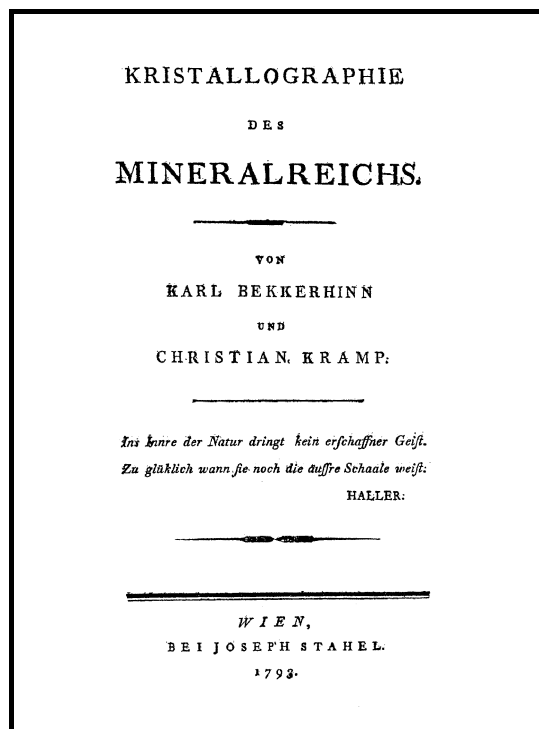
VERY SCARCE. Translated by John Andree [see note below] from *Hercynia Curiosa*; oder, *Curiöser Hartz-Wald* (Nordhausen, 1720).

John Andree. (BORN: 1699; DIED: 1785) *English physician*. Andree was professor of anatomy and surgery at the Magellan Hospital in London. He studied sexually transmitted diseases, particularly syphilis.

REFERENCES: BMC: 6, 72. • NUC: 43, 671 [NB 0262990]. • Roller & Goodman, *Catalogue*, 1976: 1, 96. • Wellcome Catalog (Books): 1, 132. (Andree) DNB. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 140-1 [by J.K. Proksch].

BEHRENS, Heinrich.

See: Behrens, Theodor Heinrich.



KRISTALLOGRAPHIE DES MINERALREICHES, 1793

BEKKERHIN, Karl. *German naturalist.*

REFERENCES: DBA: I 77, 162. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • WBI.

464. — German, 1793.

Kristallographie | Des | Mineralreichs. | [ornate rule] | Von | Karl Bekkerhinn | Und | Christian Kramp. | [rule] | Ins Innre der Natur dringt kein erschaffner Geist. | Zu glücklich wann sie noch die äussre Schaale weist. | Haller. | [ornate rule] | [double rule] | Wien, | Bei Joseph Stahel. | 1793.

8°: a-b⁸ c⁴ A-Z⁸ Aa-Dd⁸ Ee⁴; 240ℓ.; [i]-xl, [1]-439, [1] p., 8 plates (unsigned, folding; numbered Tab. I-VIII of crystal drawings and diagrams). PAGE SIZE: 218 x 130 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Gräfinn von Szecheny & Gräfinn von Festetics.; [iv], Blank.; [v]-[viii], Text of dedication, signed Karl Bekkerhinn & Christain Kramp.; [ix]-xxxiv, "Vorrede."—dated 23 March 1793.; xxxv-xl, "Inhalt."; [1]-439, Text.; [1 pg], Blank.; [At end], 8 plates.

VERY SCARCE. Co-authored with Christian Kramp [see note below]. The book begins with an introduction that gives definitions and goals. Included is a description of the use of crystallography in mineral determination. The text is then given over to describing specific mineral species that have been classified under the three headings of salts, stones and metals.

Christain Kramp. (BORN: Strasbourg, France, 10 July 1760; DIED: Strasbourg, France, 13 May 1826) *French physician.* Kramp was appointed professor of chemistry and physics at the Centralschule in Cologne, Germany.

Later he accepted a position as professor of mathematics at the University of Strasbourg. Kramp was a corresponding member of the Paris Academy of Science.

REFERENCES: BMC: 1, 127. • LKG: IX 19. • NUC: 44, 168. • Roller & Goodman, *Catalogue*, 1976: 1, 96. (Kramp) ADB. • DBA: I 702, 10-14; II 751, 274-275 & II 751, 274-275. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Poggendorff: 1, col. 1313. • WBI.

BEKKERT, ().

465. — German, 1783 [Sale catalog].

Catalogus | einer | Sammlung | Mineralien, | welche | den 24ten November 1783. | allhier in Freyberg | in der | Frau Accis-Inspector Bekkertin | Hause | gegen baare Bezahlung stückweise verauctioni= | ret werden sollen. | [ornament] | [rule] | gedruckt bey Samuel Friedrich Barthel.

8°: [1]-56 p.

RARE. Auction sale catalog of Bekkert's mineral collection. The sale was to take place on November 24, 1783 at the residence of Bekkert's widow in Freiburg in Bavaria. Based on the catalog, the collection was exclusively made up of mineral specimens.

REFERENCES: BL: [973.a.13.].

BELOZEROV, Aleksandr Alekseevich.

466. — Russian, 1873 [Bibliography].

Указатель книгъ, изданныхъ на русскомъ языкѣ, по предметамъ относящимся до горной части. Отъ начала ввеленія гражданской печати до настоі щаго времени (съ 1705 по 1873 г.). St. Petersburg, 1873.

8°: [2], 182, iii p.

RARE. This bibliography lists c1500 titles written in the Russian language relevant to mining and mineralogy published from 1705 to 1873.

REFERENCES: Besterman, *Bibliography of Bibliographies*, 1965-6: col. 3968. • BL: [11905.h.10.]. • Margerie, *Bibliographies Géologiques*, 1896: no. 2550.

BÉNÉDICT DE SAUSSURE, Horace.

See: **Saussure, Horace Bénédict De.**

BENKŐ, Ferencz. (BORN: 1745; DIED: 1816) *Hungarian naturalist, mineralogist & theologian.*

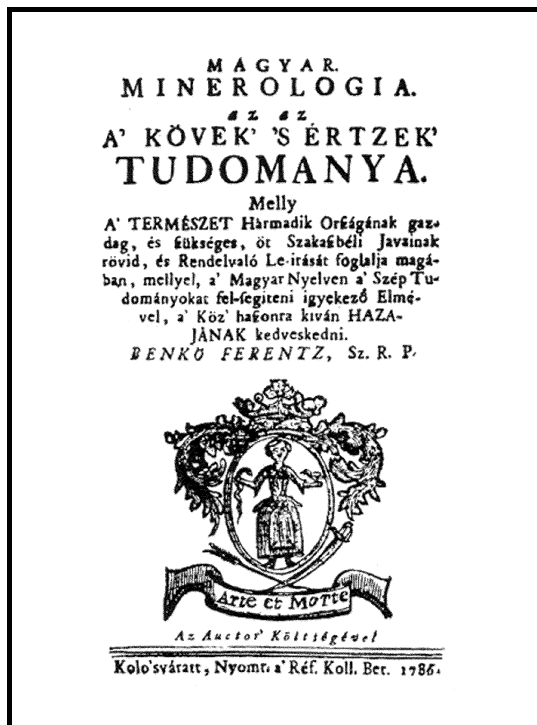
Benkő was a Calvinist minister, who was elected priest of the Nagyszeben congregation in 1784. He began studies at Bethlen College, continuing at the Universities of Göttingen and Jena. While at Jena, Benkő attended the mineralogical lectures of J.F. Gmelin, which stressed the doctrines of Werner. Afterwards, he traveled in 1783 to 1784 throughout Transylvania, exploring all aspects of natural history. He was appointed in 1790 professor of natural history, geography and the German language at Nagyenyed College in Hungary. He held this appointment until his death. Benkő was the first professor to write and lecture in the Hungarian language. He was a champion of the natural history museum at Nagyenyed, to which Benkő bequeathed his own collection which included 2120 mineral specimens.

REFERENCES: DBA: I 81, 288-289. • Magyar Életrajzi Lexikon: 2, ??.. • Sarjeant, *Geologists*, 1980: 2, 531-2. • WBI.

- Wilson, *History of Mineral Collecting*, 1994: 110-1 & 160.
- Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

A' Bányász Tudomány, és a' Lipsiai Gazdaságról értekező, Tudós Tárfaság' Nemes Tagjának V' Verner Ábrahám Urnak A' Köveknek és Értzeknek Külső Megeszmértető Jegyeik-Ről Irott, szép, és igen hafznos, Könyvetskéje, melyet, Hazájának, és a' Tanuló Ifjuságnak, lehető Hafznára Magyarra fordított és a' két Magyar Hazabéli, 's más Idegen Kö 's Ertz Nemekkel-is, a' Példákban megbovitett, Benkő Ferentz. R. P. Göttingába, 1782. Esztendőbe. (Köjo 'svaratt, 1784).

See: Werner, Abraham Gottlob.



MAGYAR MINERALOGIA, 1786

467. — Hungarian, 1786.

Magyar. | Mineralogia. | az az | A' Kövek' 'S
Értzek' | Tudomanya. | Melly | A' Természet
Harmadik Országának gaz- | dag, és szükséges,
öt Szakaszbeli Javaioak | rövid, és Rendelvaló Le-
írását foglalja magá- | ban, mellyel, a' Magyar
Nyelven a' Szép Tu- | dományokat fel-fegíteni
igyekező Elmé- | vel, a' Köz' haszonra kíván Hazá-
jának kedveskedni. | Benkő Ferentz, Sz. R.P. |
[ornament] | Az Auctor' Költségével | [ornate rule] |
Kolo'sváratt, Nyomt. a' Réf. Koll. Bet. 1786.

8°: §⁸ A-L⁸ M³; 99ℓ.; [16], [1]-181, [1] p., printer's device on title.

CONTENTS: [2 pgs], Title page, verso blank.; [5 pgs], Dedication to Farkas Banfi, Sámuel Teleki, Dániel István and Jo'sef Teleki, and dated 1785.; [1 pg], "Minerologiam illam, quam Claris- | ..."—dated 3 August 1784.; "Ezen méltóztatott Testimóniumát 'a' M. | ..."—signed Graf

Frantz Eszterházi, 1784.; "Sua Majeitas Sacratissima medio Beni- | ..."—dated 18 January 1785.; [5 pgs], "Elöl Járóbeszéd. | Kedves Olvasó!" [=preface].; [1 pg], "A' Praenumeransoknak Nevei' | Szebenből."; [1]-86, Text, beginning: "I. | Szakasz. | A' Kövek' és Földekről"; 87-99, Text, beginning: "II. | Szakasz. | A' | Sókról."; 100-107, Text, beginning: "III. | Szakasz | Az | Enyves És Égő Matéri- | Ákrol."; 108-151, Text, beginning: "IV. | Szakasz. | A' | Fél És Egész Értzekről."; 152-176, Text, beginning: "V. | Szakasz. | A' | Kövévált Dolgokrol | vagy | Petrificatumokról."; [177]-181, "Toldalék." [=references].; [1 pg], Blank.

VERY RARE. An important treatise in the history of Hungarian mineralogy, being the first written in the native tongue and describing the mineralogy of this rich geological land. Benkő, once a student of Werner's at Freiberg, followed his former teacher's principles in his descriptions of the minerals. References to other literature are provided throughout.

Facsimile reprint, 1980s: This work on mineralogy, the first published in Hungarian, was reprinted sometime in the 1980s together with 65 pages of historical introduction and a modern index.

REFERENCES: Csiky, G., "Benkő Ferencz tudomán- és művelődéstörténeti jelentősége," *Földtani Közöny (Magyarhoni földtani társulat)*, 98 (1968), no. 2, 271-6. • Csiky, G., "Die Rolle ungarischer Naturforscher in der Jenaer 'Mineralogischen Societät' und deren Einfluss auf die Entwicklung der Geowissenschaften in Ungarn," *INHIGEO*, 1978. • Csiky, G., "The role of Hungarian naturalists in the establishment and operation of the 'Mineralogische Söciete' in Jena, including its influence on the development of the earth sciences in Hungary" (pp. 423-40), in: Vitális and Kecskeméki, eds., *Museums and Collections in the History of Mineralogy, Geology and Paleontology in Hungary*. Budapest, 1991. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 50. • *Göttingische Anzeigen*: 2 (1788), 1728. • LKG: XII 114. • NUC: [no copy listed]. • Sarjeant, *Geologists*, 1980: 2, 531-2. • *Zusammenfassung, VIII. Symposium: Münster und Bonn*, 12-24 September 1978, 186-8: p. 186-8.

BENNETT, Lee Fent. (BORN: 22 August 1872; DIED: Kenosha, Wisconsin, U.S.A., 25 January 1966) *American geologist & mineralogist.*

Bennett was an alumnus (1895) as well as a faculty member (1898-1919) of Valparaiso University, where he taught the subjects of geology, zoology and mathematics. In 1919, he became the superintendent of the H.W. Gossard Co. factory in Janesville, Wisconsin. He lived in Janesville until 1928 when he moved to Saginaw, Michigan. He remained there until 1957, when because of poor health he moved to Kenosha, Wisconsin to live with a daughter. An entry in the 1914 yearbook for Valparaiso University says of Bennett: "When Professor Bennett tells a story or joke everybody laughs; not only because they are always good stories well told but because he finds a new story before he tells one. He has the happy faculty of making his work interesting. Nobody ever sleeps in his class ... He is a real friend of the students and besides being a good instructor he is a good all round fellow."

REFERENCES: Personal communication [Mel Doering, University Archivist, Valparaiso University, January 2006]. • SSDI.

468. — English, 1903 [First edition].

Rocks and Minerals by Lee F. Bennett. Valparaiso, Indiana, M.E. Bogarte, Book Company, 1903.

8°: 83 p. PAGE SIZE: 180 x 125 mm.

SCARCE. An elementary text, describing what

BERG

the author considers are typical mineral and rock specimens. No attempt is made to give either technical or exhaustive discussions of the approximately 80 specimens described. Instead those topics the author has found from his experience to get the beginner started and develop an interest in the subject are presented.

REFERENCES: NUC.

469. 2nd edition, 1907: Rocks and Minerals | [double rule] | By | Lee F. Bennett, | [...2 lines of titles and memberships...] | [rule] | Second Edition | [rule] | Valparaiso, Indiana | M.E. Bogarte Book Company, Publishers | 1907.

8°: [i]-iv, [5]-83, [1] p. PAGE SIZE: 180 x 125 mm. SCARCE.

CONTENTS: [i-ii], Title page, verso "Copyright 1903, | By Lee F. Bennette."; [iii]-iv, "Preface."; [5], "Minerals."; [6], "Rocks."; [7-8], Blanks.; [9]-42, "Minerals."; [43]-83, "Rocks."; [1 pg], Blank.

REFERENCES: NUC.

470. 3rd edition, 1914: Rocks and Minerals by Lee F. Bennett. Valparaiso, Indiana, M.E. Bogarte, Book Company, 1914.

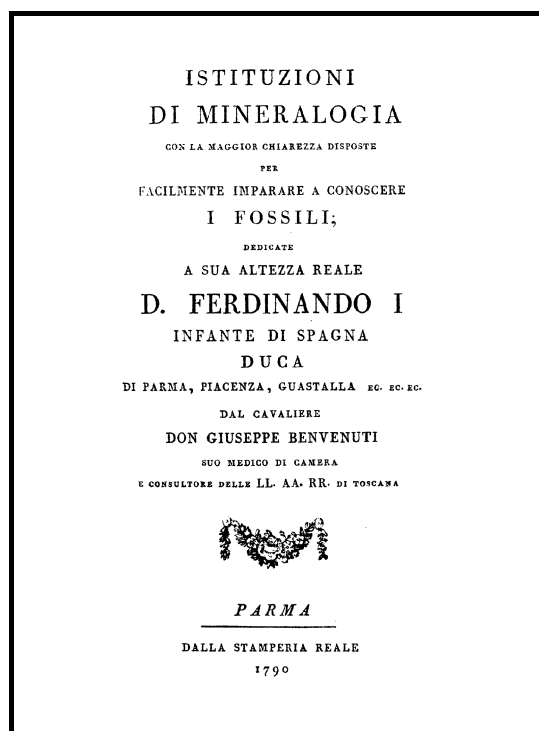
8°: 88 p. PAGE SIZE: 180 x 125 mm. VERY SCARCE.

REFERENCES: NUC.

BENVENUTI, Giuseppe. (BORN: Lucca, Tuscany, Italy, 1728; DIED: Lucca, Tuscany, Italy, c1800) *Italian physician.*

Benvenuti had a medical practice in Sarano, Italy, later relocating to the Baths of Lucca.

REFERENCES: ABI: I 139, 303-304. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • Poggendorff: 1, cols. 144-5. • WBI.



ISTITUZIONI DI MINERALOGIA, 1790

471. — Italian, 1790.

Istituzioni | di Mineralogia | con la Maggior Chiarezza Disposte | per | Facilmente Imparare a Conoscere | I Fossili; | Dedicate | a sua Altezza Reale | D. Ferdinando I | Infante de spagna | Duca | di Parma, Piacenza, Guastallaec. ec. ec. | Dal Cavaliere | Don Giuseppe Benvenuti | Suo Medico di Camera | e consultore delle LL. AA. RR. di Toscana | [ornament] | Parma | [rule] | Dalla Stamperia Reale | 1790.

8°: π^2 a⁸ b-p⁴; 66 ℓ .; [4], [i]-xxiii, [1], [1]-104 p. PAGE SIZE: 208 x 135 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Altezza Reale."; [i]-vii, "Al Lettore Giuseppe Benvenuti [Prefazione]."; [viii], Blank.; "[ix]-xxiii, "Introduzione."; [1 pg], Blank.; [1]-81, Classification scheme.; [82], Blank.; 83-87, "Indice."; [88], Blank.; 89-90, "Indice degli Autori e di Dotti Uomini che Favorirono delle Notizie o dei Fossili."; 91-104, "Indice delle Materie."

VERY SCARCE. This beautifully printed volume contains a standard classification scheme. Its primary divisions are earths, stones, salts, inflammables, semi-metals, metals, petrifications and fluid minerals. Gatterer (1798-9) notes that this is "nothing other than a naked translation" of F.A. Cartheuser's *Elementa Mineralogiæ Systematicæ* (Francofurti ad Viadrum, 1755).

REFERENCES: Beckmann P.Ö.B.: 17, 554. • BMC: 1, 137. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 42. • LKG: XII 127. • NUC: 47, 455.

BERG, Ernst von. (BORN: 1824; DIED: ?) *Russian? bibliographer.*

Privy councillor and knight, librarian of the Royal Botanical Gardens, and member of the Royal Mineralogical Society of St. Petersburg. He was also a member of the Naturforscher Gesellschaft at Dorpat [now Tartu, Estonia].

REFERENCES: Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: 22.

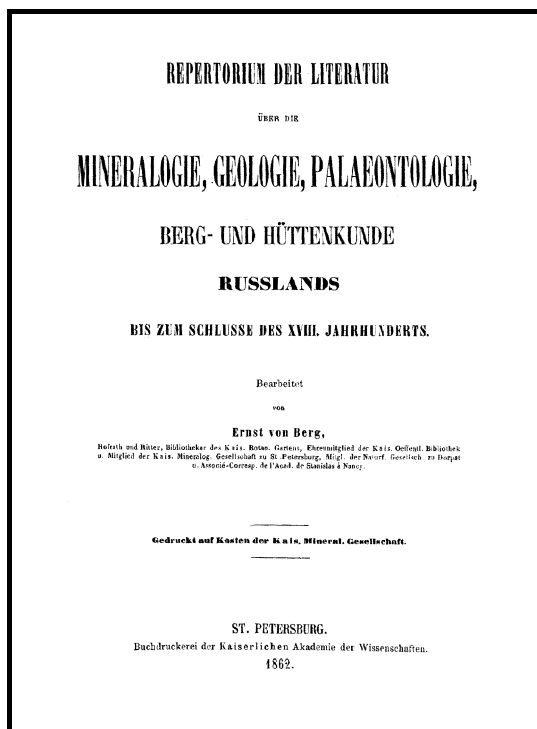
472. — German, 1862.

Repertorium Der Literatur | über die | Mineralogie, Geologie, Palaeontologie, | Berg- und Hüttenkunde | Russlands | Bis Zum Schlusse Des XVIII. Jahrhunderts. | Bearbeitet | von | Ernst von Berg, | [...3 lines of titles and memberships...] | [rule] | Gedruckt auf Kosten der Kais. Mineral. Gesellschaft. | [rule] | St. Petersburg. | Buchdruckerei der Kaiserlichen Akademie der Wissenschaften. | 1862.

8°: π^8 II² 1-14⁸ 15²; 124 ℓ .; [i]-xx, [1]-227, [1] p., name and subject indexes. PAGE SIZE: 240 x 150 mm.

CONTENTS: [i-ii], Title page, verso "Одобрено ..."; [iii]-xi, "Vorwort."—signed Ernst von Berg, 3 (15) July 1862.; [xii], Blank.; [xiii]-xx, "Inhalts-Verzeichniss."; [1]-134, Text.; [135]-138, "Nachträge."; [139]-208, "Autoren-Register."; [209]-227, "Sach-Register."; [1 pg], "Berichtigungen."

RARE. This useful book is a comprehensive bibliography of mineralogy, geology, palaeontology, mining and assaying in Russia until the end of the 18th century. In the forward, Berg provides a good review



REPERTORIUM DER LITERATUR, 1862

of previous bibliographical works in these fields. He then goes on to explain that his work covers literature not covered in any other bibliography. This includes both books and periodical literature in any language pertinent to these fields of study in Russia. Complete information including pagination is provided for each entry. The text is divided into various categories including Bibliography and History, Nomenclature and Dictionaries, Descriptions of Museums and Mineral Collections, Economic and Technical Mineralogy, Commercial Products of Mineralogy, Topographical Mineralogy, Physical Properties of Minerals, Geology, Palaeontology, Mining, Assaying and Salt Processing. Comprehensive name and subject indexes conclude the book.

REFERENCES: BL: [11906.b.8.]. • BMC: 1, 138. • Margerie, *Bibliographies Géologiques*, 1896: no. 2552. • NUC: 48, 74. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 568.

BERGAKADEMIE.

See: Freiberg Bergakademie.

BERGBÜCHLEIN.

Ein nützlich bergbühlēy (Augsburg, c1505, and other editions).

See: Rülēin Von Calw, Ulrich.

BERGEMANN, Gustav Wilhelm. *German pharmacist & mineral collector.*

Bergemann was a very successful pharmacist in Berlin. As a hobby he built a superior mineral collection that represented different localities of each mineral species.

This cabinet was known as one of the finest of its time. It was acquired by Berlin's Humbolt University in 1837 after Bergemann's death.

Beschreibung der Mineraliensammlung des Herrn Bergemann. (Berlin, 1834).

See: Kayser, Gustav Eduard.



BERGMAN

BERGMAN, Torbern Olof. (BORN: Katrineberg, Vestergötland, Sweden, 20 March 1735; DIED: Medevi, Sweden, 8 July 1784) *Swedish chemist, mineralogist, astronomer, physicist & geographer.*

Bergman entered the University of Upsala at the age of seventeen, from which his family expected he would graduate in either divinity or law, although he preferred mathematics and natural science. However, through overwork he injured his health and during his convalescence he studied botany and entomology to such good purpose he was able to send LINNEAUS several new kinds of insect. He returned to the University in 1758, and upon graduation began teaching there mathematics and then physics. Upon the resignation of J.G. WALLERIUS from the chair of chemistry and mineralogy, Bergman became a candidate for the appointment. Although opposed by many, he had a friend in Crown Prince Gustavus III, and chancellor of the University, who gained the appointment for Bergman. He held this post until the end of his relatively short life (he died at the age of 49). Bergman's most important chemical contribution was his *Essay on Elective Attractions* (English trans., London, 1775), a study of chemical affinity. His other writings covered many subjects but are all related to some aspect of science, most particularly chemistry and mineralogy. For example, in 1761 he was the first to discover the planet Venus had an atmosphere.

In chemistry, Bergman is considered the father of quantitative analysis, physical chemistry, modern chemical nomenclature, the concept of equivalent weights, and the electromotive series, and is the discoverer or made major contributions to the discovery of at least eight chemical elements: platinum, molybdenum, tungsten, manganese, cobalt, nickel, oxygen, and barium. In crystallography he has been considered a forerunner of Haüy in founding the science. He wrote the first great treatise in physical geography, *Physisk Beskrifning* (1st ed., Upsala, 1766-74), and he contributed substantially to our modern philosophy of science.

BERGMAN

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 21. • *Catalogue of Portraits of Naturalists*: 174 [2 portraits listed]. • Drugulin, *Sechstausend Portraits*, 1863: no. 368. • DSB: 2, 4-8 [by W.A. Smeaton]. • *Encyclopaedia Britannica*, 11th edition. • Fischer, *Mineralogie in Sachsen*, 1939: 239. • Hooykaas, R., "Torbern Bergman's crystal theory," *Lychnos*, 1952, 21-54. • *ISIS*, 1913-65: 1, 132. • Lambrecht & Quenstedt, *Catalogus*, 1938: 34. • Partington, *History of Chemistry*, 1961-70: 3, 179-99. • Poggendorff: 1, cols. 1536-7. • Sarjeant, *Geologists*, 1980: 2, 536-7, Suppl. 1 (1986), 1, 287 & Suppl. 3 (1996), 1, 434. • SBA: Scandinavian Biographical Archive: B-022, 423-441. • Schaedler, *Biographisch Handwörterbuch*, 1891: 9. • Schufle, J.A., "Torbern Bergman, Earth Scientist," *Annals of Science*, 12 (1967), 59-97. • Schufle, J.A., *Torbern Bergman. A man before his time*. Lawrence, Kansas, Coronado Press, 1985. • *Svenskt Biografiskt Lexikon*: 3, 591-?? . • WBI. • *World Who's Who in Science*: 159.

Collected Works

473. — Latin, 1779-90.

Torberni Bergman | [...5 lines of titles and memberships...] | Opuscula | Physica et Chemica, | Pleraque Antea Seorsim Editae, | Jam Ab Auctore | Collecta, Revisa Et Aucta. | Vol. 1. | [tapered rule] | Cum Tabulis Ænæis. | [rule] | Cum Privilegio S. Elect. Saxoniae. | [rule] | Holmiae, Upsaliae & Aboae, | In Officini Librariis Magni Swederi, | Regg. Acad. Bibliop. | MDCCLXXIX.

6 vols. [VOL 1: 1779] 8°: π^2)⁽⁷ χ^2 A-Bb⁸ Cc⁶; ??ℓ.; [6], [I]-XVI, [1]-411, [1] p., 2 folding plates (apparatus, experiments and crystals). [VOL 2: 1780] 8°: π^3 A-Hh⁸ Ii⁵ Kk²; ??ℓ.; [6], [1]-510 p., 2 folding plates (crystals and blowpipe). [VOL 3: 1780] 8°: π^3 A-Gg⁸ Hh⁵; ??ℓ.; [6], [1]-490 p., 3 plates (diagrams of double elective attractions). [VOL 4: 1787] 8°: π^5 A-Aa⁸ Bb⁴ Cc³; ??ℓ.; [10], [1]-392, [6] p. [VOL 5: 1788] 8°: \star^4 A-Cc⁸ Dd³; ??ℓ.; [8], [1]-421, [1] p., one folding map, 5 plates (diagrams, leaves, rainbow). [VOL 6: 1790] 8°: π^4 A-O⁸ P-Aa⁴; ??ℓ.; [8], [1]-214, [92] p., 2 folding plates (diagrams).

CONTENTS: [Vol 1] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso quotation from Bacon.; [1 pg], Dedication.; [1 pg], "Index Commemationum in Primo Volumine."; [I]-XVI, "Introitus de Indagando Vero."; [1]-404, Text.; 405-411, "Index."; [1 pg], "Errata typographica graviora."

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso quotation from Bacon.; [1 pg], Dedication.; [1 pg], "Index Commemationum."; [1]-506, Text.; 507-508, "Index Numeri paginas indicant."; 509-510, "Addenda."

[Vol 3] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso quotation from Bacon.; [1 pg], Dedication.; [1 pg], "Index Commemationum."; [1]-479, Text.; 480-482, "Addenda."; 483-488, "Index."; 489-490, "Corrigenda."

[Vol 4] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso quotation from Bacon.; [1 pg], Dedication.; [1 pg], Blank.; [2 pgs], "Præfatio Editoris."; [2 pgs], "Index Disseertationum."; [1]-392, Text.; [6 pgs], "Index."

[Vol 5] [2 pgs], Title page, verso quotation from Hippocrates.; [4 pgs], "Præfatio Editoris."; [2 pgs], "Commentationum quæ in hoc volumine."; [1]-416, Text.; [417]-421, "Index."; [1 pg], "Corrigenda."

[Vol 6] [2 pgs], Title page, verso quotation from Hippocrates.; [4 pgs], "Lect. sal. Editor."; [2 pgs], Contents.; [1]-214, Text.; [92 pgs], "Index in vniversos sex tomos."

VERY SCARCE. This is the first edition of the collected scientific papers of Bergman, including memoirs on carbon dioxide, elective affinity, the blowpipe, and chemical analysis of minerals and mineral waters. Also contained in the collection are revised and expanded editions of many of the dissertations on chemical subjects offered by Doctoral candidates at the University of Uppsala. Bergman edited the first three volumes, contributing a prefatory essay "On the investigation of truth." The last three volumes were edited by E.B.G. Hebenstreit and were published after Bergman's death.

Contents of the six volumes: [Vol 1] Introitus de indagando vero.; De acido aëreo.; De analysi aquarum.; De aquis Upsaliensibus.; De fonte acidulari Danemarkensi.; De aqua pelagica.; De aquis medicatis frigidis, arte parandis.; De aquis medicatis calidis, arte parandis.; De acido sacchari.; De confectione aluminis.; De tartaro antimoniat.; De magnesia.

[Vol 2] De formis crystallorum, præsertim e spatho ortis.; De terra silicea.; De lapide hydrophano.; De terra gemmarum.; De terra turmalini.; De calce auri fulminante.; De platina.; De mineris ferri albis.; De niccolo.; De arsenico.; De mineris zinci.; De præcipitatis metallicis.; De minerarum docimasia humida.; De tubo ferruminatorio, ejusdemque usu in explorandis corporibus, præsertim mineralibus.

[Vol 3] De analysis ferri.; De causa fragilitatis ferri frigidis.; De acidis metallicis.; De diversa phlogisti quantitate in metallis.; De stanno sulphurato.; De antimonialibus sulphuratis.; Producta ignis subterranei chemice considerata (De productis vulcaniis); De attractionibus electivis.; De ferro et stano igne commixtis.

[Vol 4] De primordiis chemiæ.; Historiæ chemiæ medium seu obscurum ævum a medio sæculo VII. ad medium sæc. XVII.; De analysi lithomargæ. De terra asbestina.; Meditationes de systemate fossilium naturalis.; De connubio hydrargyri cum acido salis.; De laterum coctione rite instituenda.; De aquis acidulatis Medviensibus.; De fontibus medicatis Lokanis.; De cobalto, niccolo, platina et magnesia, eorumque per præcipitationes investigata indole.; Observatines nonnullæ de calculis urinariis.

[Vol 5] Analysis chimica pigmenti indicis.; De terris geoponicis.; De magnesia nitri.; De montibus Vestrogothicis.; Classes larvarum.; De galla quadam singulari.; De natura tenthredinum et erucarum spuriarum.; De pityocampe sive eruca pini.; De apibus ed mellifici vicissitudinibus ex alveorum ponderatione aestimandis.; De coco aquatico sive hirudine octoculata.; De hirudinibus.; Autororae boreales, annis MDCCLIX, LX, LXI & LXII. observatæ.; De aurorae borealis altitudine.; De arcus coelistis explicationibus.; Historia doctrinae de crepusculis.; De fulguratione observationes.; Experimenta electrica, transitum commotionis per aquam illustrantia.; De electicitate crystalli Islandicae.; Experimenta electrica cum tabulis vitreis sibi mutuo affricatis instituta.; Experimenta electrica cum taeniis sericis instituta.; De vi electrica turmalini.

[Vol 6] De crepusculis.; De interpolatione astronomica.; De attractione universali.; Oratio de nuperrimis chemiæ incrementis.; Observationes mineralogicae.; De avertendo fulmine.; Index.

Latin 1786-92: *Torberni Bergman ... Opuscula Physica et Chemica. Editio Nova Emendatior ...* Upsaliae, 1786-92. 3 vols. [Vol 1: 1788] 8°: xxiv, 388 p., 2 plates. [Vol 2: 1792] 8°: [6], 509 p., 2 plates. [Vol 3: 1786] 8°: [8], 488 p., 3 plates. New edition of the first three volumes of the *Opuscula*.

Ernst Benjamin Gottlieb Hebenstreit. (BORN: Leipzig, Germany, 10 February 1758; DIED: Leipzig, Germany, 12 December 1803) *German apothecary & physician*. Trained as an apothecary, Hebenstreit eventually was appointed professor extraordinary first of general medicine (1785) than anatomy and surgery (1793) at the University of Leipzig.

REFERENCES: (1779-90) Bolton, *Bibliography of Chemistry*, 1893: 301. • Cole, *Chemical Literature*, 1988: no. 102. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 66. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 98 [vols. 1-2 only]. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 443. • LKG: XI 9a. • Monström, *Torbern Bergman Bibliography*, 1957: no. 150. • Norman Catalog: no. 192. • Norman Sale Catalog: no. 287. • NUC: 48, 424-7 [NB 0342656]. • Partington, *History of Chemistry*, 1961-70: 3, 182-3 [lists the dissertations in chronological order assigning his own numbers]. • Roller & Goodman, *Catalogue*, 1976: 1, 103. • Wellcome Catalog (Books): 2, 149. • BL: [955.h.23-28.]. • (Latin 1786-92) Monström, *Torbern Bergman Bibliography*, 1957: no. 282. • NUC: 48, 424-7 [NB 0342659]. (Hebenstreit) DBA: I 490, 408-413. • *Deutsche Apotheker Biographie*: 1, ?? . • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 1043. • WBI.

474. — French, 1780-5.

Opuscules | Chymiques | et Physiques | de M.T. Bergman, | [...5 lines of titles and memberships...] | Recueillis, revus et augmentés par lui-même. | Traduits par M. De Morveau, | Avec des Notes. | [double rule] | Tome Premier. [-Second.] | [double rule] | [ornament] | A Dijon, | Chez L.N. Frantin, Imprimeur du Roi. | [double rule] | M. DCC. LXXX. [-M. DCC. LXXXV.] | Avec Approbation et Privilège du Roi.

2 vols. [VOL 1: 1780] 8°: π^8 a-b⁸ A-Ee⁸; ??ℓ.; [16], [i]-xxxii, [1], [1]-446, [2] p., 2 folding plates (apparatus and crystals). [VOL 2: 1785] 8°: π^2 a⁸ A-Kk⁸; ??ℓ.; [4], [i]-xvi, [1]-525, [3] p., 2 folding plates (blowpipe and crystals).

CONTENTS: [Vol 1] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], Dedication.; [1 pg], Quotation from Bacon.; [10 pgs], "Table du Tome Premier."; i-x, "Avertissement du Traducteur."; xi-xxii, "Discours Préliminaire. De la Recherche de la Vérité."; [1 pg], One line from Horat.; [1]-434, Text.; 435-445, "Table des Matières."; 446, "Approbation."; [1 pg], "Additions et Corrections."; [1 pg], "Avis au Relieur."

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], Dedication.; [ii], Quotation from Bacon.; iii-xii, "Table du Tome Second."; xiii-xvi, "Avertissement du Traducteur."; [1]-517, Text.; [518], Blank.; 519-525, "Table des Matières."; [1 pg], "Approbation."; [1 pg], "Additions et Corrections pour le Tome 1er."; [1 pg], Blank.

RARE. Much revised by Bergman through corrections and additions, this is a translation into French by Guyton de Morveau (or according to Partington by Mme. Picardet and supervised by Guyton) of the first two volumes of the *Opuscula Physica et Chemica* (Holmiae, Upsaliae & Aboae, 1779-80). Guyton himself added an introduction to each volume and a great number of long and valuable notes. When Bergman died, Guyton discontinued the translation.

Louis Bernard Guyton-Morveau. (BORN: Dijon, Côte d'Or, France, 4 January 1737; DIED: Paris, France, 2 January 1816) *French chemist & aristocrat*. Guyton-Morveau was a lawyer by profession and served from 1755 to 1782 as a member of the Dijon Parliament. Science had always been his hobby, and after his retirement, he turned his attention to chemistry. He worked with Lavoisier to reform the nomenclature of chemistry. When the French Revolution occurred, Guyton-Morveau returned to politics on the side of the revolutionists and survived the period, although he did nothing to help Lavoisier. He served as master of the mint under Napoleon, and was made a baron in 1811.

REFERENCES: BL: [45.f.25.]. • Bolton, *Bibliography of Chemistry*, 1893: 301. • Cole, *Chemical Literature*, 1988: no. 104. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 66-7. • Edelstein, *Catalog of the History of Chemistry*, 1981: no. 211. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 99 [vol. I only]. • Monström, *Torbern Bergman Bibliography*, 1957: no. 165. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 416. • NLM 18th Century Books (Blake): 43. • NUC: 48, 424-7 [NB 0342653-4]. • *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts*: 17 (1781), 245 & 27 (1785), 234 [review]. • Partington, *History of Chemistry*, 1961-70: 3, 183 C [calling the second volume 'very rare']. • Roller & Goodman, *Catalogue*, 1976: 1, 103. • Sallander, *Bibliotheca Walleriana*, 1955: no. 11070. • Smeaton, W.A., "L.B. Guyton de Morveau: a Bibliographical Study," *Ambix*, 6 (1957), 18-34: 24. • Wellcome Catalog (Books): 2, 149. (Guyton-Morveau) ABF: I 497, 226-262; II 328, 177-178. • Beauchamp, *Biographie Moderne*, 1816. • Berthollet, C.L., *Éloge Historique de Guyton-Morveau*, Paris, 1816. • Bouchard, G., *Guyton-Morveau, chimiste et conventionnel, 1737-1816*, Paris, 1938, 365 p. • DBF: 17, cols. 439-42 [by C. Meyer]. • DSB: 5, 600-4 [by W.A. Smeaton]. • Feller, *Biographie Universelle*, 1851. • Granville, A.-B., "An account of the life and writings of G. de Morveau," *Journal of Science and the Arts*, ?? (1817), ?? . • Grison, E., M. Goupil, and P. Bret, eds., *A scientific correspondence during the chemical revolution: Louis-Bernard Guyton de Morveau and Richard Kirwan, 1782-1802*. Edited by Emmanuel Grison, Michelle Goupil, and Patrice Bret. Berkeley, Office for History of Science and Technology, University of California at Berkeley, 1994. vi, 257 p., illus. • *Nouvelle Biographie Générale* (Hoefer): 22, cols. 968-72 [by L. Louvet]. • Poggendorff: 1, cols. 981-2. • Schaedler, *Biographisch Handwörterbuch*, 1891: 46-7. • Smeaton, W.A., "The contributions of P.-J. Macquer, T.O. Bergman and Guyton de Moreau to reform chemical nomenclature," *Annals of Science*, 10 (1954), 87-106. • Smeaton, W.A., "Guyton de Morveau and chemical affinity," *Ambix*: 11 (1963), 55-64. • Smeaton, *Portable Chemical Laboratories*, 1966. • Smeaton, W.A., "L.B. Guyton de Morveau. Early platinum apparatus," *Platinum Metals Review*, 10 (1966), 24-28. • Smeaton, W.A., "Louis Bernard Guyton de Morveau, F.R.S. (1737-1816) and his relations with British scientists," *Notes & Records, Royal Society of London*, 1967, 113-130. • WBI.

475. — German, 1782-90.

Kleine physische und chymische Werke. Aus dem Lateinischen übersetzt von Heinrich Tabor. [Volumes 4-6:] Nach dem Tode des Verfassers herausgegeben von E.B.G. Hebenstreit. Frankfurt am Mayn, 1782-90.

6 vols. [VOL 1: 1782] 8°: [2], [1]-548 p., 2 plates. [VOL 2: 1782] 8°: [1]-590 p., 2 plates. [VOL 3: 1785] 8°: [1]-614 p., 3 plates. [VOL 4: 1788] 8°: [16], [1]-502 p. [VOL 5: 1789] 8°: [4], [1]-490, [33] p., 6 plates. [VOL 6: 1790] 8°: [4], [1]-290 p., 2 plates.

VERY SCARCE. Translation by Heinrich Tabor of

2 vols. [VOL 1: 1787] 8°: [1]-46, [1], [1]-127, [1]-130, [1]-32, [1]-20, [1]-30, [1]-76, [1]-63 p., 4 plates. [VOL 2: 1788] 8°: [1]-119, [1], [1]-50, [1], [1]-48, [1]-83, [1], [1]-46, [1], [1]-29, [1], [1]-62, [1], [1]-109, [1], [1]-63, [1] p., 2 plates. The odd pagination is due to each of the individual dissertations having its own pagination within the vols.

VERY SCARCE. A selection of essays translated from the Latin of *Opuscula Physica et Chemica*, most based on the French edition of 1780-1785, with notes by Guyton de Morveau. They are all separately paged and signed, with some having errata at end. Most have Tofani's signed dedication and notes signed by him. There are also translations and notes also credited to Giovanni Fabbroni, with Tofani listed as printer and editor. There are four folded tables, not included in paging; the first unnumbered, the others numbered I-III, and two folding etched plates of chemical apparatus: "Dell' acque d'Upsal. Della Fonte Danimarchense. Dell' acqua del mare. Dell' acque medicinali fredde. Dell' acque medicinali calde."

Napoli issue, 1787: Opuscoli | Chimici e Fisici | di Torberno Bergman | Tradotti in Italiano | Con Aggiunte e Note | [rule] | Tomo Primo. [-Secondo.] | [rule] | [ornament] | Napoli MDCCCLXXXVII. [-MDCCCLXXXVIII.] | [rule] | Presso Giuseppe Maria Porcelli Librajo, | e Stampatore della Reale Acc. Militare | Con licenza de' Superiori.

2 vols. [Vol 1: 1787] 8°: a-b⁸ c⁴ A-Aa⁸; 213ℓ.; [2], [I]-XL, 1-384 p., 4 folding plates. [Vol 2: 1788] 8°: p² a-f⁸ A-X⁸ Y⁴; 222ℓ.; [4], I-XCVI, 1-343, [1] p., one folding plate.

Rare. This Naples edition of Bergman's dissertations copies the Firenze translation of 1787-8; however, Cole thinks this edition was authorized and not pirated as suggested by Monström. The contents of Tomo 1 are identical with those of the Firenze-edition. In Tomo 2 there are missing three papers; however, added to this volume is an Elogio storico di M. Bergman, by F. Vicq d'Azyr, translated from *Histoire de la Societe Royale de Medecine*, 1782-3, Paris 1787, pp. 141-187.

REFERENCES: (1787) Cole, *Chemical Literature*, 1988: no. 105. • Monström, *Torbern Bergman Bibliography*, 1957: no. 280. • BL: [no copy listed]. • (Napoli, 1787) Cole, *Chemical Literature*, 1988: no. 106. • Monström, *Torbern Bergman Bibliography*, 1957: no. 281a. • NUC: [NSB 002230].

Comprehensive Bibliography

478. — English, 1957 [Bibliography].

Torbern Bergman | A Bibliography of his Works | Compiled | by | Birgitta Monström | Almqvist & Wiksell | Stockholm.

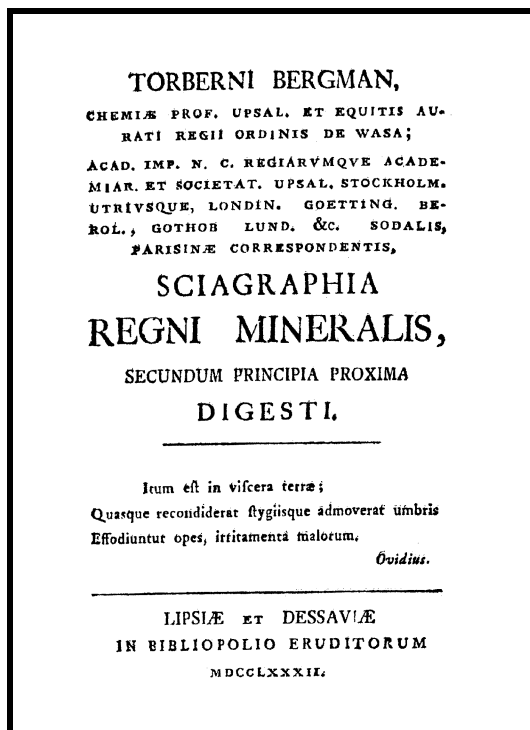
8°: [1]-120 p., frontispiece (reproduction of Wedgewood medallion), index. PAGE SIZE: 185 x 116 mm.

CONTENTS: [1-2], Half title page, verso blank.; [Facing title page, frontispiece reproducing a Wedgewood medallion of Bergmans profile.]; [3-4], Title page, verso "Abbreviation."—at bottom of page. "Printed in Malung, Malungs Boktryckeri AB, 1957."; 5-6, "Introduction."—signed Birgitta Monström, Uppsala, December 1956.; 7-100, Bibliography, 307 numbered entries.; 101-118, "Subject Index. (Arranged according to languages)."; 119-120, "Postscript."—dated December 1956.

SCARCE. A bibliography of the editions,

issues, states, translations, collections of Torbern Olaf Bergman's writings. Although lacking in some detail, it is the best general reference available to his numerous publications.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 103.



SCIAGRAPHIA REGNI MINERALIS, 1782

Sciagraphia Regni Mineralis

479. — Latin, 1782.

Torberni Bergman, | [...7 lines of titles and memberships...] | Sciagraphia | Regni Mineralis, | Secundum Principia Proxima | Digesti. | [rule] | [...3 lines of quotation in Latin, signed Ovidius...] | [rule] | Lipsiae et Dessaviae | In Bibliopolio Eruditorum | MDCCCLXXXII.

8°: A-K⁸ L⁴; 84ℓ.; [1]-166, [2] p. PAGE SIZE: 157 x 95 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-[6], "B.L."; [7]-146, Text.; 147-154, "Appendix Prima."; 155-166, "Appendix Secunda."; [2] pgs], "Errata."

VERY SCARCE. Perhaps edited by JOHANN JACOB FERBER, this is the first edition of Bergman's important foundational work in mineral classification and nomenclature. In the *Sketch of the Mineral Kingdom, digested according to the constituent parts of the substances that compose it*, Bergman shows his support for classifying minerals according to their chemical composition and not on the then common method of external appearance. Bergman's handbook, which is rich in observa-

tions about the chemistry of minerals, went further in regard to the subject than had its predecessors because Bergman had developed a portable blow-pipe kit. With this tool, which he took with him out into the field and was thus able to analyze minerals on the spot for their chemical constituents he was able to create a practical method of classification. In contrast to the previous systems of BROMELL and CRONSTEDT chemical knowledge had developed to a state where it was possible for a chemical system of mineral classification of to be prepared and be of practical use. Bergman recognized four major groups of minerals: salts, earths, metals, and inflammable bodies, and then subclassified each of these groups, exercising care in trying to provide a more consistent nomenclature than the contemporary standards.

In his attempt to reform mineralogical nomenclature, Bergman set up a systematic approach to the mineral kingdom. It closely follows the naming conventions used by Linnaeus to successfully name plants and involving two Latin names. This meant the naming of the mineral by the Latin name of the prevalent alkali, earth or metal combined with the name of the acid. For example, copper chloride would be called *cuprum salitum*. Bergman's nomenclature as used in the *Sciagraphia* was an attempt at a general reform of mineralogical as well as chemical names, and it was successful in this respect being adopted by Louis Guyton de Morveau in the same year, and thus helped to standardise chemical nomenclature. Bergman recognized four classes of pure chemical foundation, called salts, earths, metals, and phlogistic materials. These were translated into Latin as sales, terræ, metalla, and phlogistica. Two other classes were added to hold impure substances, petræ were rocks and petrificata were for organic fossil substances. These classes were then subdivided into genera after the method of Linnaeus.

The regard for Bergman as a scientist was such that his student and biographer, P.J. Hjelm, records that before the first edition of the *Sciagraphia* was printed, no less than five different translations of it were announced in different places. Not all of these original announcements materialized, although the text was eventually distributed in five different languages including German, Italian, French, English and Portuguese [which see next entries]. All this activity seems to indicate a considerable interest in Bergman's system for mineralogy.

In the Preface to his *Sciagraphia* Bergman stated that he had been urged by J.J. Ferber to publish his manuscript outline of mineral classification. This apparently lead Moström to conclude that the work had been "edited by J.J. Ferber." However, Bergman's text contains no evidence that this was the actual case. The Preface reads:

"In answer to the request of my very good friend, Mr. Ferber, I sent him a small outline of mineralogy in which the minerals were arranged according to their constituent elements. After looking it over, he asked my permission to publish it. At first I thought it would

be better not to publish a work so imperfect, especially considering the number of analyses which remained to be made. Mr. Ferber replied that a perfect method was not yet to be expected in so extensive a field, but that having once laid a foundation I might occasionally make such additions and corrections, in new editions of the work, as future experiments might make necessary. Indeed I was fully aware that the system would be perfected more quickly if submitted to the inspection of other more discerning Chemists, than if its completion depended solely on me. The different remarks of others will correct errors, which by further work I might have corrected, but if science is advanced, it does not matter by whom. So Genera and Species are given, except in the Appendices which, since they did not properly belong in my outline, contain Genera only. The Genera are based on the principle elements, and the Species on the remaining components. Varieties depend upon external appearances, and are therefore omitted here."

Related work, 1773: "Variae crystallorum formae a spatho ortae," in: *Nova Acta Regiae Societatis Scientiarum Upsaliensis*. Upsaliae, 1773, 1, 150-155, one plate.

Bergman's pupil Johann Gottlieb Gahn had discovered that the scalenohedra of "dog tooth" spar (calcite) when cleaved along certain planes would allways yield a rhombohedral kernel the same shape as ordinary calcspar. On this and other observations, Bergman authored "Various crystal forms that take their origin from spar," which described a new theory of crystal structure that was of the utmost importance in the development of crystallographic science. He noted that since crystals present such a seemingly endless variety of forms, it appears as though Nature were joking with us. However, by careful study and comparison, he deduced that these multitude of forms could all be derived from simpler bodies which he called "primitive forms." He confined his study to calspar and its basic form the "oblique parallelepiped." Using this basic shape he theorized that they arranged themselves in thin sheets (lamellae) which when stacked together produced the widely divergent forms found in Nature. From the view point of history, Bergman's lamellar theory is one of the first attempts to explain how widely divergent crystal forms could be derived from simpler shapes, and one which René Just Haüy would accept and greatly expand upon in his own writings. This work appears in the *Opuscula* (see: 2, 1-56).

REFERENCES: (1782) Dana's 7th (Bibliography): 66. • *English Review*: 1 (1783), 390-3. • LKG: XII 96. • Moström, *Torbern Bergman Bibliography*, 1957: no. 211. • NUC: 48, 424-7 [NB 0342673]. • BL: [987.a.24].

480. Reissue, 1782: *Sciagraphia Regni Mineralis, secundum principia proxima Digesti*. Lipsiae, In Bibliopolio I.G. Mülleriano, 1782.

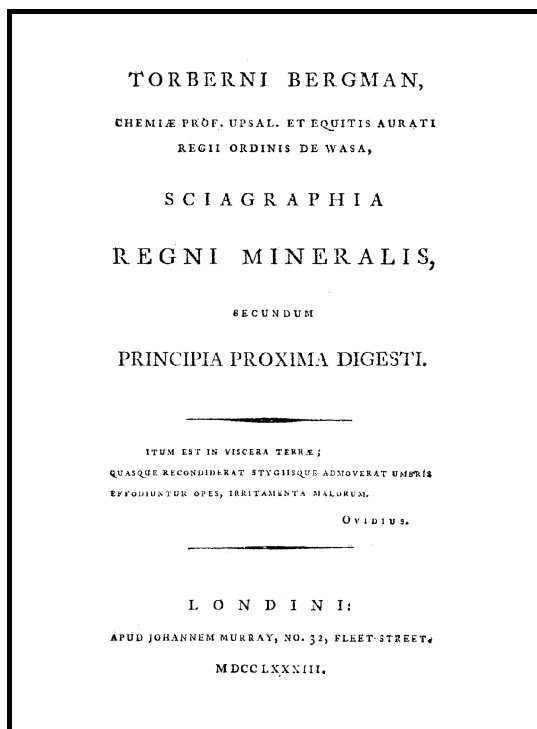
8°: A-K⁸ L⁴; 84ℓ.; [1]-166, [2] p. PAGE SIZE: 157 x 95 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-[6], "B.L."; [7]-146, Text.; 147-154, "Appendix Prima."; 155-166, "Appendix Secunda."; [2 pgs], "Errata."

RARE. This is apparently a reissue of the sheets used to make up the first edition, with a new title page.

REFERENCES: Moström, *Torbern Bergman Bibliography*, 1957. • NUC: 48, 424-7. • Roller & Goodman, *Catalogue*, 1976: 1, 103 [NB 0342674].

481. London issue, 1783: Torberni | Bergman, | Chemiæ Prof. Upsal. Et Equitis Aurti | Regii Ordinis De Wasa, | *Sciagraphia* | Regni Mineralis, | Secundum | Principia Proxima Digesti. | [tapered rule] | [...3 lines of quotation, signed Ovidius...] | [tapered rule] | Londini: | Apud Johannem Murray, No. 32, Fleet-Street. | MDCCLXXXIII.



SCIAGRAPHIA REGNI MINERALIS, 1783

8°: A⁴ B-K⁸ L7; 83ℓ.; [1]-165, [1] p. PAGE SIZE: 215 x 132 mm.

CONTENTS: [1]-2], Title page, verso blank.; [3]-4, "Lector; | Bibliopolas."; [5]-8, "B.L."; [9]-165, Text.; [1 pg], Blank.

VERY SCARCE. London reprint of the 1782 edition.

REFERENCES: BL: [no copy listed]. • BMC: 1, 142. • LKG: XII 96. • Monström, *Torbern Bergman Bibliography*, 1957: no. 234. • NUC: 48, 424-7 [NB 0342675].

482. Pirate edition, 1783: *Sciagraphia Regni Mineralis, secundum principia proxima Digesti*. Lipsiæ & Dessaviæ, 1783.

8°: 127 p.

RARE. Monström believes this work could be a pirated edition with a false place of publication.

REFERENCES: BL: [no copy listed]. • Monström, *Torbern Bergman Bibliography*, 1957: no. 233. • Roller & Goodman, *Catalogue*, 1976: 1, 103.

483. Italian transl., 1783: Torbern Bergman | [...6 lines of titles and memberships...] | *Sciagraphia | Regni Mineralis | Secundum Principia Proxima | Digesti*. | Editio Prima Italica. | [ornament] | Florentiæ MDCCLXXXIII. | [ornate rule] | In Typographia ad Signum Roboris | Prope S. Mariam Majorem | Superiorum Permissu.

8°: A-K⁸; 80ℓ.; [1]-160 p.

CONTENTS: [1]-2], Title page, verso quotation from Ovid.; 3-5, "B.L."; [6], Blank.; 7-143, Text.; 144-158, Appendix.; 159-160, "Index."

RARE. This is the first Italian edition of Bergman's *Sciagraphia Regni Mineralis* (1st ed., Lipsiæ & Dessaviæ, 1782). It is a faithful rendering of the original text.

REFERENCES: BL: [954.b.42.(1.)]. • Cole, *Chemical Literature*, 1988: no. 107. • LKG: XII 96. • Monström, *Torbern Bergman Bibliography*, 1957: no. 235. • NUC: [no copy listed]. • Partington, *History of Chemistry*, 1961-70: 3, 184 G.(a), 191 & 192.

484. Italian transl., 1783: *Descrizione Compendiosa | del | Regno Minerale | secondo i principj prossimi | opera | di Torbarno Bergman | Professore di Chimica a Upsalia Cavaliere | del Regio ordine di Wasa Socio | di molte delle più illustri | Accademie d'Europa. | Traduzione Corredata di Note. | [ornament] | In Bergamo | [double rule] | Per Francesco Locatelli | Con Permissione | 1783.*

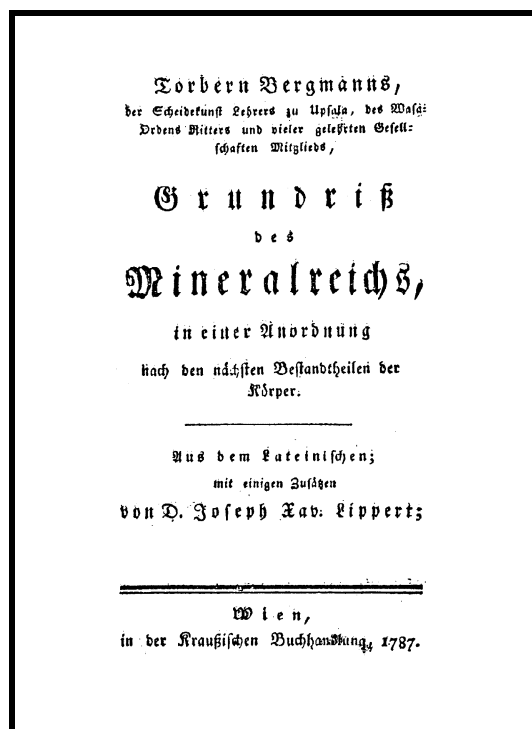
8°: π¹ ★⁸ A⁷ B-G⁸ H¹⁰; 174ℓ.; [2], [I]-XVI, 3-132 p.

CONTENTS: [2 pgs], Title page, verso quotation from Ovid.; [I]-[IV], Dedication.; V-XV, "Prefazione."; XVI, "Errori Correzioni."; 3-101, Text.; 102-132, "Annotazioni."

VERY RARE. Translation by Giovanni Maironi of Bergman's *Sciagraphia Regni Mineralis* (1st ed., Lipsiæ & Dessaviæ, 1782).

Giovanni Maironi da Ponte. (BORN: Bergamo, Italy, 16 February 1748; DIED: Bergamo, Italy, 29 January 1833) *Italian naturalist & mineralogist*. From 1800 to 1828, Maironi was professor of natural history at the Lyceum in Bergamo. He was a member of the Italian Scientific Society.

REFERENCES: BL: [no copy listed]. • Cole, *Chemical Literature*, 1988: no. 109. • Monström, *Torbern Bergman Bibliography*, 1957: [no copy listed]. • NUC: [no copy listed]. (Maironi da Ponte) ABI: II 344, 373. • LKG: p. 296. • Poggendorff: 2, cols. 18-9. • WBI.



GRUNDRIS DES MINERALREICHS, 1787

485. German transl., 1787: Torbern Bermanns, | [...3 lines of titles and memberships...] | *Grundriß | des | Mineralreichs, | in einer Anordnung | nach den nächsten Bestandtheilen der | Körper. | [rule] | Aus dem Lateinischen; | mit einigen Zusätzen | von D. Joseph Xav. Lippert; | [double rule] | Wien, | in der Kraußischen Buchhandlung, 1787.*

8°: A-M⁸; 104ℓ.; [1]-207, [1] p. PAGE SIZE: 175 x 105 mm.

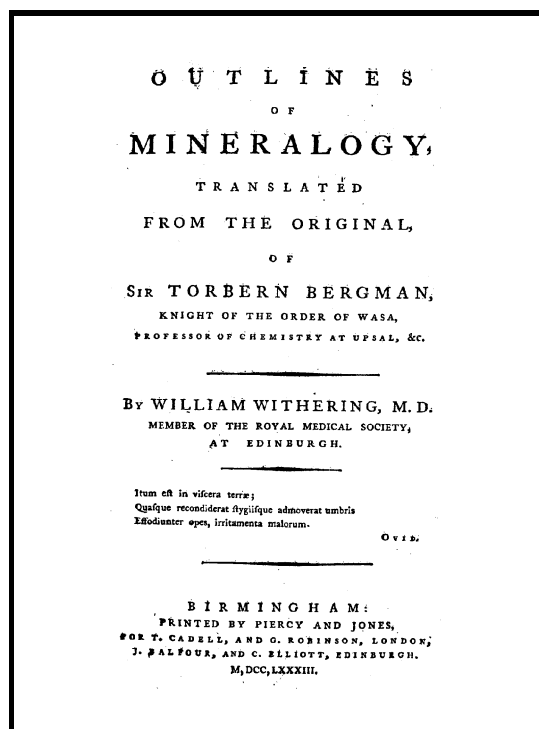
BERGMAN

CONTENTS: [1-2], Title page, verso blank.; [3]-6, "An dem Leser.;" [7]-204, Text.; 205-207, "Inhalt.;" [1 pg], Blank.

RARE. Translation by Joseph Xavier Lippert of *Sciagraphia Regni Mineralis* (Lipsiae, 1782). It is a standard, but competent translation, following the format of the original text, with some minor additions. It discusses the theoretical classification of minerals before providing a descriptive mineralogy divided into classes of salts, earths, stones and metals.

German, 1782: "Kurzer Abriss des Mineralreichs nach den nächsten Grundtheilen geordnet. Aus dem Lateinischen," see: J.H. Pfingsten, *Bibliothek ausländischer Chemisten, Mineralogen und mit Mineralien beschäftigten Fabrikanten nebst derley biographischen Nachrichten*, 3, 507-623 (i.e., 523).

REFERENCES: (1787) LKG: XII 97a. • Monström, *Torbern Bergman Bibliography*, 1957: no. 278. • NUC: 48, 424-7 [NB 0342638]. • Roller & Goodman, *Catalogue*, 1976: 1, 103. • Ward & Carozzi, *Geology Emerging*, 1984: no. 180. • BL: [no copy listed]. • (German, 1782) LKG: XII 97a. • Monström, *Torbern Bergman Bibliography*, 1957: no. 228.



OUTLINES OF MINERALOGY, 1783

486. English transl., 1783: Outlines | of | Mineralogy, | translated | from the Original | of | Sir Torbern Bergman, | Knight of the Order of Wasa, | Professor of Chemistry at Upsala, &c. | [tapered rule] | By William Withering, M.D. | Member of the Royal Medical Society, | At Edinburgh. | [tapered rule] | [...4 lines of Latin quotation, signed Ovid.] | [tapered rule] | Birmingham: | Printed by Piercy and Jones, | For T. Cadell, and G. Robinson, London | J. Balfour, and C. Elliott, Edinburgh. | M,DCC,LXXXIII.

8°: π^4 A-H⁸ χ^2 ; 70 ℓ .; [4], [i]-iv, [1]-128, [4] p. PAGE SIZE: 220 x 135 mm.

CONTENTS: [2 pgs], Blank, verso "Lately published by the same Author." [An Essay on Electricity].; [2 pgs], Title page, verso blank.; [i]-iv, "Translator's

Preface."—dated 1st September 1783.; [1]-3, "Author's Preface.;" [4], Blank.; [5]-11, "Of a Natural System of Mineralogy.;" 12-13, "Classes of Fossils.;" 14-36, "Class I. Salts.;" 37-62, "Class II. Earths.;" 63-68, "Class III. Inflammables or Bitumina.;" 69-115, "Class IV. Metals.;" 116-121, "Appendix. The First.;" 122-128, "Appendix. The Second."—at end, "Finis.;" [4 pgs], "Index."—at end, "Errata."

RARE. Translation by William Withering of *Sciagraphia Regni Mineralis* (Lipsiae, 1782), this first edition in English contains some additions by the translator.

William Withering. (BORN: Wellington, Shropshire, England, 28 March 1741; DIED: Larches near Birmingham, England, 6 October 1799) *English physician*. Withering graduated with his M.D. from the University of Edinburgh in 1766. In 1774, he then opened a medical practice in Birmingham. He was the first to describe native barium carbonate, later named after him as the mineral species, witherite. Withering is best known as a botanist, and his work on the foxglove is a classic. He was elected a Fellow of the Royal Society of London in 1784. He had collections of both minerals and plants.

REFERENCES: BL: [T.1571.(5.)]. • BMC: 1, 143. • Cole, *Chemical Literature*, 1988: no. 108. • Dana's 7th (Bibliography): 66 & 83. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 640. • Hoover Collection: no. 115. • LKG: XII 98b*. • Monström, *Torbern Bergman Bibliography*, 1957: no. 231. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 418. • NUC: 48, 424-7 [NB 0342660]. • Partington, *History of Chemistry*, 1961-70: 3, 184 G.(b) & 197. • Roller & Goodman, *Catalogue*, 1976: 1, 103. (Withering) BBA: I 1187, 210-231. • DNB. • DSB: 14, 463-5 [by W.F. Bynum]. • Partington, *History of Chemistry*, 1961-70: 3, 299-300. • Poggendorff: 2, cols. 1343-4. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 198.

487. French transl., 1784: Manuel | Du Minéralogiste, | Ou | Sciographie | Du Règne Minéral, | Distribué | D'Après L'Analyse Chimique. | Par M. Torbern Bergman, | [...4 lines of titles and memberships...] | Mise au jour par M. Ferber, Professeur de Chimie à Mittaw. | Et traduite et augmentée de Notes | Par M. Mongez le jeune, Chanoine Régulier de | Sainte-Geneviève, Auteur du Journal de Physique, | & Membre de plusieurs Académies. | [ornament] | A Paris, | Chez Cuchet, Libraire, rue & hôtel Serpente. | [ornate rule] | M. DCC. LXXXIV. | Sous le Privilège de l'Académie Royale des Sciences.

8°: a-e⁸ f⁴ A-X⁸ Y⁴; 216 ℓ .; [i]-lxxxviii, [1]-343, [1] p., one plate (blowpipes and other apparatus). PAGE SIZE: 195 x 120 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, Dedication to Comte de Vergennes.; vii-lxxxvi, "Introduction.;" lxxxvii-lxxxviii, "Avis Au Lecteur, | Par M. Bergman.;" [1]-329, Text.; 330-340, Index.; 341-343, "Extrait des Registres de l'Académie Royale | des Sciences, du 26 Août 1783.;" [1 pg], Blank.; [At end], One plate.

VERY SCARCE. First French translation by J.-A. Mongez from *Sciagraphia Regni Mineralis* (Lipsiae, 1782), and dedicated to the Comte de Vergennes. It is an important mineralogical work with extensive notes added by the translator to each mineral described and numerous citations to the works of other chemists and mineralogists. It went far in promoting the general reform of chemical and mineralogical nomenclature first in France and then the rest of Europe.

Jean-André Mongez. (BORN: Lyon, France, 1751; DIED: Lyon, France, 1788) *French chemist, naturalist & writer*. Distinguished as a writer on the physical sciences, Mongez contributed articles to the *Journal de Physique* on botany, chemistry and physics. He was elected to the Academie des Sciences in 1785.

REFERENCES: BL: [953.f.7.]. • BMC: 1, 143. • Cole, *Chemical Literature*, 1988: no. 110. • Edelstein, *Catalog of the History of Chemistry*, 1981: no. 208. • Hoover Collection: no. 114. • LKG: XII 98b. • Monström, *Torbern Bergman*

Bibliography, 1957: no. 249. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 419. • NUC: 48, 424-7 [NB 0342644]. • Partington, *History of Chemistry*, 1961-70: 3, 184 G.(c), 191 & 192. • Roller & Goodman, *Catalogue*, 1976: 1, 103. (Mongez) ABF: I 750, 185-187. • Beauchamp, *Biographie Moderne*, 1816. • *Biographie Universelle*: 28, 622. • *Nouvelle Biographie Générale* (Hoefer): 35, col. 989. • Poggendorff: 2, cols. 186-7. • WBI.

488. French transl., 1792: Manuel | Du Minéralogiste; | Ou | Sciagraphie | Du Règne Minéral, | Distribuée | D'Après L'Analyse Chimique; | Par M. Torbern Bergman, | [...4 lines of titles and memberships...] | Mise au jour par M. Ferber, Professeur de Chimie à Mittaw; | Et traduite et augmentée de Notes | Par M. Mongez le jeune, Chanoine Régulier de | [...2 lines of titles and memberships...] | Nouvelle Édition, considérablement augmentée, | par J.C. Delaméthérie. | [double rule] | Tome Premier [-Seconde]. | [double rule] | [ornament] | A Paris, | Chez Cuchet, Libraire, rue & hôtel Serpente. | [tapered rule] | 1792.

2 vols. [VOL 1] 8°: a-g⁸ h⁴ A-Y⁸ Z⁴; 240ℓ.; [j]-cxx, [1]-359, [1] p.; [VOL 2] 8°: π² A-2F⁸ 2E⁶; 224ℓ.; [4], [1]-443, [1] p., two plates (one folding; chemical & mineralogical equipment, including a blowpipe and mineralogical hammer and crystal drawings and internal crystal arrangements). PAGE SIZE: 200 x 118 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, Dedication to the Count De Vergennes, signed Mongez.; ix-cxii, "Introduction."; cxiv-cxv, "Avant-Propos | Sur cette nouvelle Édition, | par J.C. Delaméthérie."; cxvj-cxviii, "Avis Au Lecteur, | Par M. Bergman."; cxix-cxx, "Additions & fautes à corriger."; [1]-359, Text.; [1 pg], Blank.

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1]-423, Text.; 424-4345, "Étymologie | Des noms des principales Substances minérales."; 436-442, "Table | Des Matières."; 443, "Addition & Fautes à corriger."; [1 pg], Blank.

SCARCE. Second edition in French, retaining the translated text and extensive notes added by M. Mongez and with expanded comments by JEAN CLAUDE DE LA MÉTHÉRIE. This edition is one of the most important works in the chemical classification of minerals published in the late eighteenth century, showing the state of both chemistry and chemical mineralogy at the time.

REFERENCES: BL: [953.d.6.7.]. • BMC: 1, 143. • Cole, *Chemical Literature*, 1988: no. 111. • Dana's 7th (Bibliography): 69. • Edelstein, *Catalog of the History of Chemistry*, 1981: no. 209. • *Freilich Sale Catalog*: no. 46. • LKG: XII 98b. • Monström, *Torbern Bergman Bibliography*, 1957: no. 293. • NUC: 48, 424-7 [NB 0342645]. • Partington, *History of Chemistry*, 1961-70: 3, 184 G.(c). • Roller & Goodman, *Catalogue*, 1976: 1, 103.

489. Portuguese transl., 1799-1800: Manual do Mineralogico, ou esboço do reino mineral, disposto segundo a analyse chimica por Mr. Torbern Bergman, Cavalheiro da Ordem de Wasa, Professor de Chimica em Upsal, Membro de muitas Academias, Publicado por Mr. Ferber, professor de Chimica em Mittaw; Traduzido e augmentado de notas por Mr. Mongez o Moço, Author do Jornal de Phisica, e Membro de Muittas Academias. Nova Edição consideravelmente augmentada por M.J.C. de La Methérie. Ultimanente traduzido por Martim Francisco Ribeiro de Andrade Machado, Formado em Methematica, e Bacharel em Philosophia. Publicado por Fr. José Mariano da Conceição Velloso. Lisboa, Na Offic. de João Procopio Correia da Silva, M.DCC.XCIX [1799-1800].

2 vols. [VOL 1] 8°: lxix, [1] errata, [1] blank, 351 p.; [VOL 2] 8°: 404, [1] errata, [1] blank p., 2 folding plates. PAGE SIZE: 200 x 140 mm.

RARE. Translation by Martim Francisco Rigeiro de Andrade of *Sciagraphia Regni Mineralis* (Lipsiæ & Dessaviæ, 1782). Borba (1983) records that another printing of the first volume exists by the same printer, in the same year,

but with a different title page.

REFERENCES: BL: [no copy listed]. • Borba, *Bibliographia Brasiliana*, 1983: 1, 36. • Monström, *Torbern Bergman Bibliography*, 1957: no. 297.

Work on Blowpipes

490. — Latin, 1779.

Torbern Bergmann, | [...3 lines of titles and memberships...] | Commentatio | De | Tvbo Ferrvminatorio | Eivsdemqve Vsv, | In Explorandis Corporibvs | Praesertim Mineralibvs. | [rule] | Ex Actorvm Societatis Literariae | Bohemicae Tomo IV. | [rule] | [ornament] | [double rule] | Vindobonae 1779. | Apvd Ioann. Pavl. Kravs.

8°: A-D⁸; 32ℓ.; [1]-64 p., one folding plate (showing a blowpipe, lamp and equipment).

CONTENTS: [1-2], Title page, verso blank.; [3-4], Text (=introduction.); [5]-64, Text.; [At end], one plate.

RARE. In *De Tubo Ferruminatorio* Bergman provides the fullest account to date of the equipment and fluxes used in blowpipe analysis. Using a modified three-piece blowpipe made from silver with a gold tip, he records the reactions of minerals fused with the three fluxes of soda, borax and microcosmic salt (sodium ammonium phosphate) in hollow charcoal supports or silver or gold spoons. He is also the first to distinguish between the oxidizing and reducing flames of the flame, which he used with excellent effect in qualitative analysis to determine the elements making up many minerals. Although introduced by Swab, Rinman, Cronstedt and popularized by Engström, it was Bergman's success in blowpipe analysis and his excellent texts that made it an important tool of the mineralogist and chemist for almost two centuries.

German, 1779: "Abhandlung vom Gebrauche des Löthrohres, bey Untersuchung der Mineralien [transl. by Ignaz von Born]," in: *Abhandlungen einer Privatgesellschaft in Böhmen*, 4 (1779), pp. 254-304, one plate. German translation of Bergman's original Latin edition.

REFERENCES: (1779) Burchard, *History of Blowpipe Analysis*, 1984: 254. • Hoover Collection: no. 113. • LKG: XI 8. • Monström, *Torbern Bergman Bibliography*, 1957: no. 136. • Partington, *History of Chemistry*, 1961-70: 3, 185. • Roller & Goodman, *Catalogue*, 1976: 1, 102. • Schuffe, J.A., *Torbern Bergman. A man before his time*. Lawrence, Kansas, Coronado Press, 1985: 244, 266 & 478. • Szabadváry, *History of Analytical Chemistry*, 1966: 53-4. • BL: [no copy listed]. • (German, 1779) Monström, *Torbern Bergman Bibliography*, 1957: no. 130.

491. Swedish transl., 1781: Chemiæ Professoren | och Riddaren af Kongl. Wasa Orden, | Herr Torbern Bergmans | Afhandling | Om | Blåsröret, | samt | Dess Bruk och Nyttä wid Krop= | pars Undersökning, i syn= | nerhet de Mineraliske: | Öfwersatt Ifrån Latinska Språket, med Herr Förfat= | tarens tilläggningar. | [rule] | Stockholm, | Tryckt hos Commissar. P.A. Brodin, 1781. | På Öfwersättarens Bekostnad.

8°: A-D⁸ E⁴ F²; 38ℓ.; [1]-76 p., one folding plate (showing a blowpipe, lamp and equipment).

CONTENTS: [1-2], Title page, verso quotation signed Cicero.; [3]-[4], "Företal."; [5]-73, Text.; 74-75, "Förteckning på Paragrapherne."; 76, "Rättelser."

RARE. Swedish translation by Peter Jacob Hjelm of the revised Latin edition of *Commentatio de Tubo Ferruminatorio*, which appeared in the *Opuscula Physica*

BERGMAN

et Chemica (Upsaliae, vol. 2, 1780, pp. 455-506). It encompassed all that was known to that time on the use of the blowpipe.

Peter Jacob Hjelm. (BORN: Sunnerbo Hårad, Sweden, 2 October 1746; DIED: Stockholm, Sweden, 7 October 1813) *Swedish chemist*. In 1782, Hjelm was appointed an assayer at the mint. Then in 1794, he became the warden of the mint in Stockholm and overseer of the chemistry laboratory at the Bergcollegium. He was elected a member of the Swedish Academy of Science in 1787.

REFERENCES: BL: [no copy listed]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899: p. 86. • Cole, *Chemical Literature*, 1988: no. 77. • LKG: XI 8. • Monström, *Torbern Bergman Bibliography*, 1957: no. 174. • NUC: 48, 424-7 [NB 0342604]. • SWIM: 144. (Hjelm) *Biographiskt Lexicon*. • Poggendorff: 1, cols. 1113-4. • SBA: Scandinavian Biographical Archive: B-119, 099-101. • *Svenskt Biografiskt Lexikon*: 19, 104. • WBI.

Meditationes de Systemate Fossilium

492. — Italian, 1784.

Torberni Bergman | [...6 lines of titles and memberships...] | Meditationes | De | Systemate Fossilium | Naturali. | Editio Prima Italica. | Praefatus Est Et Indicem Adjecit | Eeditor Italus. | [ornate rule] | Florentiae MDCCLXXXIV. | [rule] | Typis Josephi Tofani | Superiorum Permissa. | Prostant venales apud Aloysium Carlieri | in Via dei Guicciardini.

8°: A-H⁸; 64ℓ.; [1]-125, [1] p.

CONTENTS: [1-2], Title page, verso blank.; 3-10, "Editoris Praefatio." (=preface.); 11-124, Text.; 125, "Index." (=table of contents); [1 pg], Blank.

RARE. Translated and edited by Italus [pseudonym] from "Meditationes de systemate fossilium naturali" (see: *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, 4 (1784), pp. 63-128). In his "Meditation on a System of Natural Fossils," Bergman joined his voice to those of Guyton de Morveau and Pierre Joseph Macquer in proposing of the chemical nomenclature was necessary. He proposes that absurd names that memorialize their discoverers be eliminated. Also, names that refer to some mysterious property should be dropped.

This is Bergman's last major statement in mineralogy, published the year of his death. It indicates that had he lived, he would have collaborated with De Morveau on a complete overhaul of chemical/mineralogical nomenclature.

The different bodies that make up the mineral kingdom are briefly defined and include organic, solid and liquid items. Reasons are then provided why they need to be organized into a classification system. This is followed by speculation on mineral formation and descriptions of physical and chemical properties, such as form, specific gravity, hardness, behavior in fire, before the blowpipe and methods of examining fossils by the wet method. At the conclusion is a long discussion providing reasons and the theory behind Bergman's system of nomenclature.

Latin, 1782: *Commentationes, e quarto novorum Reg. Scientiarum Societatis Upsaliensis actorum tomo excerptae*. Upsaliae, 1782. 4°: [2], 51-631 (i.e., 136) p. This

work contains three of Bergman's papers. These are, "Commentatio chemica de causa fragilitatis ferri frigidi," "Meditationes de systemate fossilium naturali" and "De ferro et stanno igne commixtis." These papers are reprints with a specially printed title page, published beforehand from volume 4 of *Nova acta Regiae Societatis Scientiarum Upsaliensis*, which did not appear until 1784.

REFERENCES: (1784) Monström, *Torbern Bergman Bibliography*, 1957: no. 250 ["trade edition"]. • NUC: 48, 424-7 [NB 0342546]. • Roller & Goodman, *Catalogue*, 1976: 1, 103. • BL: [954.b.42.(2.)]. • (Latin, 1782) LKG: XII 99c. • Monström, *Torbern Bergman Bibliography*, 1957: no. 97.

493. Latin transl., 1788: Torberni Bergman | Meditationes | De | Systemate Fossilium | Naturali, | In Usum | Oryctologiae Studiosorum | Iterum Typis Mandatae. | [tapered rule] | Oxoniae: | Prostant Apud J. Et J. Fletcher. | M DCC LXXXVIII.

8°: [1]-111 p.

RARE. This trade edition printed in Oxford uses the text issued in the *Opuscula* (vol. 4, 1787).

REFERENCES: BL: [B.548.(1.)]. • LKG: XII 99c. • Monström, *Torbern Bergman Bibliography*, 1957: no. 281 ["trade edition"]. • NUC: 48, 424-7 [NB 0342547]. • Roller & Goodman, *Catalogue*, 1976: 1, 103.

Dissertations related to Mineralogy

494. Dissertation, 1774: Chemisk och Mineralogisk Afhandling | om | Hvitajärnmalmer, | [double rule] | Med den Vidtberömda Philosoph. Facult. i Upsala | Samtycke, | Under Inseende | Af | Mag. Torb. Bergman, | Chemiæ Professor och Ridd. af Kongl. Wasa-Orden; Ledamot af | Kejsarl. Acad. Naturæ Curiosorum, Kongl. Vet. Acad. | i Stockholm, och Kongl. Soc. i London och Upsala, | Til almätt ompröfvande, | F.M.D. 22 Junii 1774 i Gustavian-ska Lärosalen, | Utgifven | Af | Peter Jacob Hjelm, | Smolänning. | [rule] | Upsala, | Tryckt hos Johan Edman, Kongl. Acad. Boktryck.

4°: π² A-E⁴ F¹; 23ℓ.; [4], [1]-42 p. PAGE SIZE: 182 x 148 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication.; [1]-42, Text.

VERY SCARCE. This dissertation, in which Peter Jacob Hjelm was respondent describes white ores of iron (ferrous carbonate), providing analyses and show also that manganese is an important component in the composition of superior steels. The text provides a method for detecting manganese within minerals. The text was revised and translated into Latin (*Opuscula*, vol. 2, 1780, pp. 184-230).

Peter Jacob Hjelm. (BORN: Sunnerbo Hårad, Sweden, 2 October 1746; DIED: Stockholm, Sweden, 7 October 1813) *Swedish chemist*. In 1782, Hjelm was appointed an assayer at the mint. Then in 1794, he became the warden of the mint in Stockholm and overseer of the chemistry laboratory at the Bergcollegium. He was elected a member of the Swedish Academy of Science in 1787.

REFERENCES: BL: [B.571.(5.)]. • Cole, *Chemical Literature*, 1988: no. 78. • LKG: XVI 258. • Monström, *Torbern Bergman Bibliography*, 1957: no. 89. • NUC: 48, 424-7 [0342609]. • Partington, *History of Chemistry*, 1961-70: 3, 182 X, 189, 190 & 194. • Schufle, J.A., *Torbern Bergman. A man before his time*. Lawrence, Kansas, Coronado Press, 1985: 58 & 241. • Szabadváry, *History of Analytical Chemistry*, 1966: p. 80. (Hjelm) *Biographiskt Lexicon*. • Poggendorff: 1, cols. 1113-4. • SBA: Scandinavian Biographical Archive: B-119, 099-101. • *Svenskt Biografiskt Lexikon*: 19, 104. • WBI.

495. Dissertation, 1775: Dissertatio Chemica | De | Niccolo, | Quam, | Consentiente Amplissima Facultate Phil., | Præsiede | Mag. Torb. Bergman, | [...4 lines of titles and memberships...] | Publico Examine Submittit | Johannes Afzelius | Arvidsson, | Vestrogotbus, | In Auditorio Gustaviano, | Die 12 Julii Anni MDCCLXXV, | Horis Ante Meridem Solitis. | [rule] | Upsaliae, | Typis Edmannianis.

4^o: A-C⁴ D² E³; 17ℓ.; [1]-30, [4] p. PAGE SIZE: 182 x 146 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-30, Text.; [4 pgs], "Nickel Malmer ..."

VERY SCARCE. In 1751, Cronstedt did chemical analyses of a mineral called Kupfer-nickel [niccolite], which had been thought to contain copper because when dissolved in acid the mineral produced a blue colored solution. Upon further investigation, involving attempts to precipitate copper metal from the solution, Cronstedt concluded that the mineral did not contain copper but a new type of metal, which in 1754 he named nickel, after the material from which it was first obtained. Although most of Cronstedt's contemporaries accepted his findings, there were many important chemists of the period who believed Cronstedt had not discovered a new metal but a complex alloy of copper, arsenic, iron and cobalt. It was not until Afzelius defended Torbern Bergman's dissertation *De Niccolo*, that Cronstedt's claim was universally accepted. A revised edition appears in the *Opuscula* (vol. 2, 1780, pp. 231-271).

Jan Afzelius. (BORN: Larss Församling, Skara Stift, Sweden, 13 June 1753; DIED: Upsala, Sweden, 20 May 1837) *Swedish chemist*. Afzelius was professor of chemistry, metallurgy and pharmacy at the University in Uppsala. He was a member of the Academy of Sciences, Stockholm.

REFERENCES: BL: [B.398.(6.)]. • Bolton, *Bibliography of Chemistry*, 1893: p. 263 [under Afzelius]. • DSB: 3, 473. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 448. • LKG: XVI 361. • Monström, *Torbern Bergman Bibliography*, 1957: no. 100. • NUC: 48, 424-7 [NB 0342622]. • Partington, *History of Chemistry*, 1961-70: 3, 182 XV, 190 & 200. • Schuffe, J.A., "Torbern Bergman, Earth Scientist," *Annals of Science*, 12 (1967), 59-97: p. 83. • Schuffe, J.A., *Torbern Bergman. A man before his time*. Lawrence, Kansas, Coronado Press, 1985: 237 & 259. (Afzelius) Almquist, *Bergskollegium*, 1909: p. 162. • Poggendorff: 1, col. 16. • SBA: Scandinavian Biographical Archive: B-003, 135-138. • Svenskt Biografiskt Handlexikon: 1, 11, portrait. • Svenskt Biografiskt Lexikon: 1, 222. • WBI.

496. Dissertation, 1775: Dissertio [sic] Chemica. | De | Magnesia Alba, | quam, | Consent. Amplissima Fac. Philosophica, | Praeside | Mag. Torb. Bergman, | [...4 lines of titles and memberships...] | Publice Ventilandum Sistet | Stipendiarius Kohreanus, | Carolus Norell, | V. Gothus. | In Aud. Gustav. D. 23 Dec. Anni 1775; | H.A.M.S. | [rule] | Upsalæ, | Typis Edmannianis.

4^o: A-C⁴ D²; 14ℓ.; [1]-28 p. PAGE SIZE: 182 x 146 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-28, Text.

VERY SCARCE. In this dissertation to which Carolus Norell was respondent, the chemical behavior of magnesia alba is examined, including its reaction with many different types of acid. Magnesia is conclusively shown to differ from lime. A revised edition appears in *Opuscula* (vol. 1, 1779, pp. 365-404).

REFERENCES: BL: [B.397.(6.)]. • Cole, *Chemical Literature*, 1988: no. 89. • Crosland, *Language of Chemistry*, 1962: p. 145-6. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 447-8. • Monström, *Torbern Bergman Bibliography*, 1957: no. 99. • NUC: 48, 424-7 [0342620]. • Partington, *History of Chemistry*, 1961-70: 3 182 XIV & 190.

497. Dissertation, 1777: Dissertatio Chemica | De | Arsenico, | quam, | Consentiente Amplissima Fac. Philosophica, | Praeside | Mag. Torb. Bergman, | Chemiæ Prof. R. et Ord., Equite Aurator R. Ord. de Wasa; | Academiæ Imp. N.C., nec non Regg. Scientiarum Societatum, | Upsaliensis, Stockholmiensis, Londinensis, Berolinensis membro | et Parisinæ Correspondente, | Publice Ventilandam Sistit | Andreas Pihl, | Westmannus, | in Audit. Gust. die 7 Maji; Anni. 1777. | H.A.M.S. | [rule] | Upsalæ, Typis Edmannianis.

4^o: π¹ A-C⁴; 13ℓ.; [2], [1]-24 p. PAGE SIZE: 178 x 146 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-24, Text.

VERY SCARCE. This dissertation to which Anders Pihl was respondent gives a short history of arsenic, its chemical behavior in metal, calx and ore forms, and its action as a mineralizer. The view is expressed that metals are only acids bound together by different quantities of phlogiston. A revised edition appears in the *Opuscula* (vol. 2, 1780, pp. 272-308).

Andreas Pihl. (BORN: 26 February 1759; DIED: c1835) *Swedish mining expert*. Pihl matriculated at the University of Upsala in 1772, and took his mining degree in 1777. He worked at mines throughout Sweden, most especially at Falun.

REFERENCES: BL: [B.370.(7.)]. • Cole, *Chemical Literature*, 1988: no. 85. • LKG: XVI 102. • Monström, *Torbern Bergman Bibliography*, 1957: no. 117. • NUC: 48, 424-7. • Partington, *History of Chemistry*, 1961-70: 3, 182 XXII & 190. • SWIM: 130. (Pihl) Almquist, *Bergskollegium*, 1909: p. 255.

498. Dissertation, 1779: Dissertatio Chemica | De | Mineris Zinci, | Quam, | Consensu Amplissimæ Fac. Philos. | Praeside | Mag. Torb. Bergman, | [...2 lines of titles...] | Publice Ventilandum Sistit | Benedictus Reinh. Geijer, | Vermelandus. | In Auditorio Gustaviano, | H.A.M.S. | Die 20 Marth, Anni 1779. | [rule] | Upsalæ | Apud Joh. Edman, Direct. & Reg. Acad. Typogr.

4^o: π¹ A-C⁴ D³; 16ℓ.; [2], [1]-30 p. PAGE SIZE: 212 x 165 mm.

CONTENTS: [2 pgs], Title page, verso quotation in Latin, signed Baco de Verulamio.; [1]-30, Text.

VERY SCARCE. In this dissertation to which Benedict Reinhard Geijer was respondent various ores of zinc are examined, many for the first time. The presence of quartz and iron in some ores is shown. A revised edition appears in the *Opuscula* (vol. 2, 1780, pp. 309-348).

Bengt Reinhold Geijer. (BORN: Bofors in Värmland, Sweden, 11 November 1758; DIED: Rörstrand, Sweden, 11 November 1815) *Swedish mining expert*. Geijer matriculated at the University of Upsala in 1776, graduating in 1779 with a mining degree. He worked at various positions in the mining industry throughout Sweden, until his death.

REFERENCES: BL: [B.398.(9.)]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899: p. 86. • LKG: XVI 452. • Monström, *Torbern Bergman Bibliography*, 1957: no. 137. • NUC: 48, 424-7 [NB 0342621]. • Partington, *History of Chemistry*, 1961-70: 3, 183 XXXII & 190. (Geijer) Almquist, *Bergskollegium*, 1909: p. 205. • Nordin-Petersson, *Konst-samlingar*, 1971: 84 & 314. • Poggendorff: 1, col. 868. • Svenskt Biografiskt Handlexikon: 1, 383, portrait.

499. Dissertation, 1779: Disseratio Chemica | De | Terra Silicea, | Quam, | Venia Amplissimæ Fac. Phil. | Praeside | Mag. Torb. Bergman, | [...3 lines of titles ...] | Publice Ventilandum Sistit | Stipendiarius Hyltingianus, | König Alexander Grönlund, | Roslagus. | In Auditorio Gustaviano Die XXIV Nov. | Anno 1779. | H.A.M.S. | [rule] | Upsalæ, | Apud Joh. Edman, direct. et reg. acad. typogr.

4^o: [4], [1]-20, [2] p. PAGE SIZE: 178 x 146 mm.

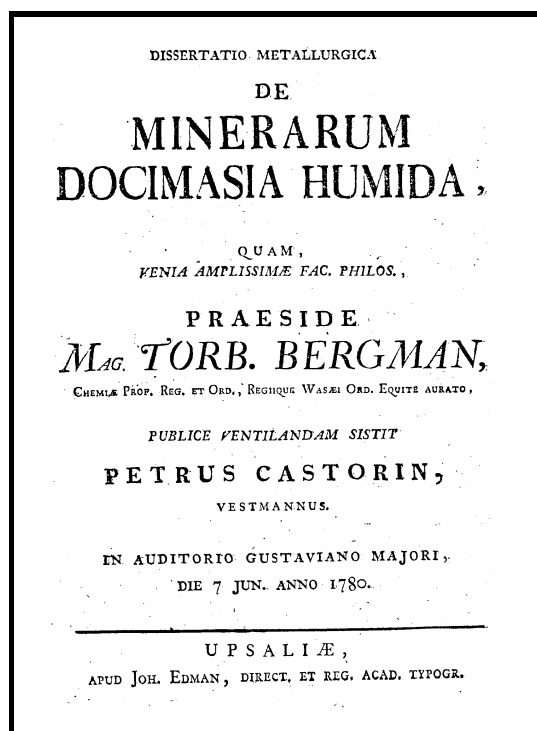
CONTENTS: [1-2], Title page, verso dedication to Jean Abraham Grill and Henri Wilhelm Peill, signed König Alexander Grönlund.; [1 pg], "Kyrkoherden."; [1]-20, Text.; [1 pg], "Till Herr Respondenten!"; [1 pg], Blank.

VERY SCARCE. This dissertation to which König Alexander Grönlund was respondent chemically examines silica earth. By the addition of acid to a dilute solution of alkali silicate, the formation of soluble (colloidal) silicic acid was observed.

König Alexander Grönlund. (BORN: ?; DIED: after 1784) *Swedish mining expert*. Grönlund matriculated at the University of Upsala in 1769, graduating with a degree in 1779.

REFERENCES: BL: [RB.23.b.2649]. • LKG: XVI 13. • NUC: 48, 424-7. • Partington, *History of Chemistry*, 1961-

70: 3, 183 XXX & 188. (Grönlund) Almquist, *Bergskollegium*, 1909: p. 210.



MINERARUM DOCIMASIA HUMIDA, 1780

500. Dissertation, 1780: *Dissertatio Metallurgica* | De | *Minerarum* | *Docimasia Humida*, | *Quam*, | *Venia Amplissimæ Fac. Philos.*, | *Praeside* | *Mag. Torb. Bergman*, | *Chemiæ Prof. Reg. et Ord.*, *Regiique Wasæi Ord. Equite Aurato*, | *Publice Ventilandum Sistit* | *Petrus Castorin*, | *Vestmannus*. | *In Auditorio Gustaviano Majori*, | *Die 7 Jun. Anno 1780*. | [rule] | *Upsaliæ*, | *apud Joh. Edman, direct. et reg. acad. typogr.*

4°: π^1 A-E4; 21 ℓ .; [2], [1]-40 p. PAGE SIZE: 182 x 146 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-40, Text.

VERY SCARCE. This important dissertation to which Petrus Castorin was respondent, is a greatly expanded and revised edition of Bergman's previous *Chemisk Afhandling om järnmalmus proberande* (Upsala, 1777). The text gives detailed and practical methods for qualitative and quantitative analysis of 15 different metals in ores, including silver, mercury, lead, iron, copper and zinc. The wet method of analysis is recommended because of its accuracy and reliability even though it takes considerably longer to perform than the dry method. A new edition appears in the *Opuscula* (vol. 2, 1780, pp. 399-454).

Per Castorin. (BORN: Grythytt, Sweden, 19 October 1761; DIED: Elfvestorp, Sweden, 20 January 1808) *Swedish mining expert*. Castorin became the third generation of his family to attend the Swedish Mining Academy. He matriculated at the University of Upsala in 1774, and graduated in 1780. He worked at the Swedish mining centers of Grythytt and Hällefors and Hjulsjö.

REFERENCES: BL: [RB.23.a.14379]. • Cole, *Chemical Literature*, 1988: no. 95. • Monström, *Torbern Bergman Bibliography*, 1957: no. 159. • NUC: 48, 424-7 [0342626]. • Partington, *History of Chemistry*, 1961-70: 3, 183 XXXV,

185 & 190. • Szabadváry, *History of Analytical Chemistry*, 1966: p. 76-8, 80 & 87. (Castorin) Almquist, *Bergskollegium*, 1909: p. 183.

501. Dissertation, 1781: *Dissertatio Chemica* | De | *Analysi Ferri*, | *Quam*, | *Venia Ampliss. Facult. Philos.*, | *Præside* | *Mag. Torb. Bergman*, | [...2 lines of titles...] | *Publice Ventilandum Sistit* | *Johannes Gadolin*, | *Aboa-Fenno*. | *In Auditorio Gustaviano Majori* | *D. 9 Jun. Anno 1781*. | [rule] | *Upsaliæ*, | *apud Joh. Edman, director. et reg. acad. typogr.*

4°: π^1 A-I4 K1; 38 ℓ .; [2], [1]-74 p. PAGE SIZE: 198 x 154 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-73, Text.; 74, "Errata typographica."

VERY SCARCE. This highly important dissertation to which Johann Gadolin was respondent examines the impurities in iron from different sources. The list of impurities found includes sulfur, plumbago (carbon), arsenic, zinc and manganese. Results are provided for analyses of various samples of iron and 273 experimental tests are cited. It establishes that a successively greater amount of iron is found in wrought iron, steel and cast iron, and thus helped define quality in steel. Revised and enlarged in the *Opuscula* (vol. 3, 1783, pp. 1-108).

French transl., 1783: *Dissertatio chemica de Analysi Ferri* ... Respondent Johannes Gadolin. [Translated by Grignon.] Paris, 1783.

Johan Gadolin. (BORN: Åbo near Helsingfors (Helsinki), Finland, 5 June 1760; DIED: Wirmo, Finland, 15 August 1852) *Finnish chemist*. Son of astronomer and physicist Jacob Gadolin [1719-1802]. For a time, Johann was a student of BERGMAN at the University of Upsala. From 1786 to 1788, Johann traveled outland to complete his studies and broaden his knowledge. He became a docent at the University of Åbo in 1789, and following GADD's death, he was appointed professor of chemistry; a post he held until 1822. He specialized in the analysis of rare earth elements, and is credited with the discovery in 1794 of the element yttrium. Gadolin's mineral collection was destroyed in 1827 by fire when the Turku Academy burned down. Gadolin held membership in the Academy of Science in Stockholm. The mineral "Gadolinite" was named in his honor by M.H. Klaproth in 1802.

REFERENCES: BL: [B.571.(4.)]. • Cole, *Chemical Literature*, 1988: no. 82. • LKG: XVI 247. • NUC: 48, 424-7. • Schufle, J.A., *Torbern Bergman. A man before his time*. Lawrence, Kansas, Coronado Press, 1985: 194-5, 239-40 & 547. • Smith, *History of Metallurgy*, 1960: p. 146-7. • Smith, C.S., *Sources for the History of Steel*, 1968: chapter 8. • Szabadváry, *History of Analytical Chemistry*, 1966: p. 80. (Gadolin) *Biographiskt Lexicon*. • DSB: 5, 215-6 [by S.J. Kopperl]. • *Finsk Biografiskt Handbok*: 1, cols. 726-8. • Laitakari, *Geologische Bibliographie Finnlands*, 1934: 57-9. • Nordin-Pettersson, *Konstsamlingar*, 1971: 436. • Ojala, V. and E.R. Schierz, "Finnish chemists," *Journal of Chemical Education*, 14 (1937), 161-5. • *Oma Maa*, 1907-12: 4, 645-9 [by R. Tigerstedt]. • Poggendorff: 1, col. 827. • SBA: Scandinavian Biographical Archive: B-086, 322-344. • *Svenskt Biografiskt Handlexikon*: 1, 377. • *Svenskt Biografiskt Lexikon*: 16, 717. • Tigerstedt, R.A.A., *Johan Gadolin. Ett bidrag till de induktiva vetenskapernas historia i Finland*. Helsinki, 1877.. • WBI. • Weeks, *Discovery of the Elements*, 1934: 230-1, portrait. • Wilson, *History of Mineral Collecting*, 1994: 136 & 171.

502. Dissertation, 1782: *Dissertatio Chemica* | De | *Terra Asbestina*, | *Quam* | *Venia Ampl. Fac. Phil.*, | *Præside* | *Mag. Torb. Bergman*, | [...2 lines of titles...] | *Publice Ventilandum Sistit* | *Carolus Gust. Robsahm*, | *Vermelandus*. | *In Auditorio Gust. Majori* | *Die 10 Julii, Anno 1782*. | [rule] | *Upsaliæ*, | *apud Johan. Edman, direct. et reg. acad. typogr.*

4°: A-B4; 8 ℓ .; [1]-16 p. PAGE SIZE: 182 x 146 mm.

CONTENTS: [1-2], Title page, verso dedication to Pierre Suther, signed Carl G. Robsahm.; [3]-16, Text.

VERY SCARCE. In this dissertation to which Carl Gustav Robsahm was respondent, the results of 13 analyses of specimens of asbestos are given. Magnesia is determined to be a component of the composition in all cases, which is shown in a table that gives the amount of each element present. Reprinted in the *Opuscula* (vol. 4, 1787, pp. 160-179).

Carl Gustaf Robsham. (BORN: 1752; DIED: Korpukulla, Sweden, after 1821) *Swedish mining expert.* Robsham matriculated at the University of Upsala in 1771. He graduated in 1782, and opened a manufacturing facility in Korpukulla.

REFERENCES: BL: [B.397.(7.)]. • Cole, *Chemical Literature*, 1988: no. 92. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 449. • LKG: XVI 110. • Monström, *Torbern Bergman Bibliography*, 1957: no. 199. • NUC: [NSB 0052222]. • Partington, *History of Chemistry*, 1961-70: 3, 183 XLV & 198. (Robsham) Almquist, *Bergskollegium*, 1909: p. 262.

503. Dissertation, 1782: Disseratio Chemica | De | Analysisi | Lithomargæ, | Quam | Venia Ampliss. Ord. Phil. | Præside | Mag. Torb. Bergman, | [...2 lines of titles...] | Pro Gradu Philos. | Publice Ventilandum Sistit | Stipendiarius Gyllenhjelmianus | Carolus Dieteric. Hjerta | Westrogothus. | In Auditorio Gustaviano Majori | D. 15 Junii 1782 | [rule] | Upsaliæ, | apud Johan. Edman, direct. et reg. acad. typogr.

4°: [2], [1]-14 p. PAGE SIZE: 182 x 146 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-14, Text.

VERY SCARCE. In this dissertation, to which Carl Dietrich Hjerta was respondent, samples of basalt are chemically examined and found to contain silica, alumina, iron and calcium carbonate.

REFERENCES: BL: [RB.23.b.2721]. • LKG: XVI 427. • Partington, *History of Chemistry*, 1961-70: 3, 183 XLIV & 198.

504. — German, 1778.

Herrn Torbern Bergmanns ... Abhandlung von dem Arsenick, nach der vorigen deutschen, durchaus fehlervollen, Uibersetzung mit der lateinischen Urschrift verglichen, verbessert und übersetzt von F. August von Wasserberg. Wien, 1783.

8°: 50 p. VERY SCARCE.

REFERENCES: LKG: XVI 103. • NUC: 48, 424-7.

505. — German, 1778.

Abhandlung von dem Arsenick. Altenburg, 1778.

8°: 102 p. VERY SCARCE.

Spanish Translation

506. — Spanish, 1794 [Spanish transl.].

Elementos físico-químicos de la análisis general de las aguas. Obra compuesta de las siete disertaciones primeras de los opúsculos físico-químicos del ilustre ... traducidos del latin al francés por M. de Morveau, y de este al castellano, con arreglo á la nueva nomenclatura, con varias adiciones y por un òrden más conforme á este tratado, por el Capitan de Caballería D. Ignacio Antonio de Soto y Araujo ... Madrid, Imp. Real siendo regente D. Lázaro Gayguer Impresor de Cámara de S.M., 1794.

4°: xii-lxx, 353 p., 3 plates, one table.

RARE. Translated by Ignacio Antonio de Soto y Araujo from volume I of the *Opuscula*). Based on the contents listed in Monström, all the papers deal with mineral waters, and not mineralogy.

REFERENCES: Monström, *Torbern Bergman Bibliography*, 1957: no. 295.

BERGMÄNNISCHES JOURNAL.

507. — German, 1788-99 [Periodical].

Bergmännisches Journal. Freiberg, Craz, 1788-1793, 1795, 1799.

12 vols. Continued as: *Neues bergmännisches Journal*, 4 vols., 1795-1815. PAGE SIZE: 178 x 108 mm.

VERY SCARCE. Edited by Alexander Wilhelm Köhler [see note below] this important mineralogical and metallurgical journal was based at the center of the German mining community in Freiberg. It is complete in six volumes each in twelve issues. It was continued as: *Neues Bergmännisches Journal*, which had irregular publication through 1815. Being published in the home city of the Bergakademie, many articles came from the leading German mineralogists of the period, including early publications of A. von Humboldt, C.A.S. Hoffmann, D.L.G. Karsten, M.H. Klaproth, and A.G. Werner.

Alexander Wilhelm Köhler. (BORN: Freiberg, Germany, 5 July 1756; DIED: Freiberg, Germany, 23 December 1832) *German mining expert.* From 1786 to 1824, Köhler was an instructor in mining techniques at the Freiberg Bergakademie. He was then appointed to the post of assessor for the state mining commission.

REFERENCES: BL: [990.c.1-12.]. • *Freilich Sale Catalog*: no. 48. • Hoover Collection: no. 116 [5 vols. only]. • Roller & Goodman, *Catalogue*, 1976: 1, 102. (Köhler) Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 1291.

BERGMÄNNISCHES WÖRTERBUCH.

508. — German, 1778.

Bergmännisches Wörterbuch, darinnen die deutschen Benennungen und Redersarten erklärt und zugleich die in Schriftstellern befindlichen lateinischen und französischen angezeigt werden. Chemnitz, J.Ch. Stoßel, 1778.

8°: [6], [1]-630, [4] p.

VERY SCARCE. The compiler of this dictionary signs the foreword as 'Bergbedienter' (=servant of mining). It is a lexicon of mining terms in German, including much that is of mineralogical interest, with definitions and citations to contemporary works written in German, Latin and French.

REFERENCES: BL: [no copy listed]. • GV (1700-1910): 158, 324. • LKG: VIII 8.

BERKENHOUT, John. (BORN: Leeds, England, 8 July 1726; DIED: Besselsleigh near Oxford, England, 3 April 1791) *English physician.*

Berkenhout graduated with a medical degree from the University of Leyden in 1765. The son of a merchant who originally came from Holland. It was intended that he should follow a career as a merchant, but at the outbreak of war between England and France in 1756 he was commissioned an officer. In 1760 at the conclusion of the

BERKHEY

war, he entered Edinburgh University to study medicine, later transferring to Leyden. He served as a British agent in the colonies during the American Revolution. Was captured, but managed to escape back to England. Besides a medical practice, he devoted most of his energies to writing books on a variety of subjects.

REFERENCES: LKG: 280.

509. — English, 1769-72 [First edition].

Outlines | of the | Natural History | of | Great Britain | and | Ireland. | Containing | A systematic Arrangement and concise Description of | all the Animals, Vegetables, and Fossiles which have | hitherto been discovered in these Kingdoms. | [rule] | By John Berkenhout, M.D. | [rule] | In Three Volumes. | [rule] | Vol. I. | Comprehending the Animal Kingdom. | [double rule] | London: | Printed for P. Elmsly (Successor to Mr. Vaillant) | facing Southampton-street, in the Strand. | M DCC LXIX [-M DCC LXXII].

3 vols. [VOL 1: 1769] 4°: A⁷ B-P⁸ Q⁵; 124ℓ.; [i]-xiii, [1], [1]-233, [1] p. Note: The first digits are missing from page numbers 126 and 176. [VOL 2: 1770] 4°: A-Z⁸ Aa¹; 185ℓ.; [i]-vii, [8]-16, ²¹1-353, [3] p. [VOL 3: 1772] 4°: π¹ a⁴ B-G⁸ H⁴; 57ℓ.; [i]-xii, [1]-103, [1] p.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-v, Dedication.; [vi], Blank.; [vii]-ix, "Preface."; [x], Blank.; [xi]-xiii, Classification of animal kingdom.; [1 pg], Blank.; [1]-220, Text.; [221]-230, Indexes.; [231]-233, Derivations, followed by brief errata under rule at bottom of Q⁵r.; [1 pg], Blank.

[Vol 2] [i-ii], Title page, verso blank.; [iii]-vii, "Preface."; [8], Blank.; [9]-16, Classification of vegetable kingdom.; [1]-335, Text.; [336], Blank.; [337]-353, "Index."; [1 pg], Blank.

[Vol 3] [i-ii], Title page, verso blank.; [iii]-vii, "Preface."; [viii], Blank.; [ix]-x, References.; [xi]-xii, classification of fossil kingdom.; [1]-93, Text.; [94], Blank.; [95]-103, Indexes.; [1 pg], Blank.

VERY SCARCE. At the time of publication this was an authoritative treatise on the British fauna and flora, giving under the Linnean and English names of each species a clear and concise description together with the type of locality in which it could be found. In the section dealing with lepidoptera details of the larvae and food plants are also given. Other volumes described animals and minerals. Altogether three editions were published with the title of the second and third changed to *Synopsis of the Natural History of Great Britain and Ireland* [see next entries].

Contents: Volume I. Comprehending the Animal Kingdom. Volume II. Comprehending the Vegetable Kingdom. Volume III. Comprehending the Fossil Kingdom.

REFERENCES: Henrey, *British Botanical Literature*, 1975: no. 443. • LKG: XIV 426. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 259. • Mullens & Swann, *Ornithology Bibliography*, 1917: pp. 58-9. • NUC: 48, 649. • Roller & Goodman, *Catalogue*, 1976: 1, 104. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 234.

510. 2nd edition, 1789: Synopsis | of the | Natural History | of | Great Britain and Ireland. | Containing | A Systematic Arrangement | And | Concise Description | Of All The | Animals, Vegetables, And Fossils, | which have hitherto been discovered | In Those Kingdoms. |

[rule] | By John Berkenhout, M.D. | [rule] | Being a | Third Edition of The Outlines, &c. | Corrected And Considerably Enlarged. | [rule] | Vol. I. [-II.] | Comprehending the Animal and Fossil Kingdoms. | [rule] | London: | Printed for T. Cadell, in the Strand. | M DCC LXXXIX.

2 vols. [VOL 1] 4°: [i]-xii, [13]-16, [2], 17-19, [1], [1]-334 p. [VOL 2] 4°: [2], [1]-380 p.

CONTENTS: [Vol 1] [i-ii], Half title page, verso blank.; [iii]-iv, Title page, verso blank.; [iii], Dedication.; [iv], Blank.; [v]-xii, "Preface."; [13]-15, Classification of animal kingdom.; [16], Blank.; [1 pg], Errata.; [1 pg], Blank.; [17]-19, "Glossary."; [20], Blank.; [1]-222, Text.; [223]-[224], Blanks.; [225], Sectional title page, "The Fossil Kingdom."; [226], Blank.; 227-313, Text.; [314], Blank.; [315]-334, Indexes.

[Vol 2] [2 pgs], Title page, verso blank.; [1]-8, Classification of vegetable kingdom.; [9]-363, Text.; [364], Blank.; [365]-380, "Index."

VERY SCARCE. Volume one contains the animal and fossil kingdoms, and volume two describes the vegetable kingdom.

REFERENCES: Henrey, *British Botanical Literature*, 1975: no. 444. • Roller & Goodman, *Catalogue*, 1976: 1, 104.

511. 3rd edition, 1795: Synopsis | of the | Natural History | of | Great Britain and Ireland. | Containing | A Systematic Arrangement | And | Concise Description | Of All The | Animals, Vegetables, And Fossils, | which have hitherto been discovered | In Those Kingdoms. | [rule] | By John Berkenhout, M.D. | [rule] | Being a | Third Edition of The Outlines, &c. | Corrected And Considerably Enlarged. | [rule] | Vol. I. [-II.] | Comprehending the Animal and Fossil Kingdoms. | [rule] | London: | Printed for T. Cadell, and sold by T. Cadell, Junior, | and W. Davies, (Successors to Mr. Cadell) | in the Strand. | M DCC XCV.

2 vols. [VOL 1] 4°: π¹ A⁸ a² B-X⁸ Y⁷; 179ℓ.; [2], [i]-xii, [13]-19, [1], [1]-334 p. [VOL 2] 4°: [A]² B-Ee⁷ Ff² Gg⁸; 4227ℓ.; [4], [1]-450, [2], [451]-466 (i.e., 468) p. VERY SCARCE.

CONTENTS: [Vol 1] [2 pgs], Half title page, verso blank.; [i-ii], Title page, verso blank.; [iii], Dedication.; [iv], Blank.; [v]-xii, "Preface."; [13]-15, Classification of animal kingdom.; [16], Blank.; 17-19, "Derivations."; [20], Blank.; [1]-222, Text.; [223]-224, Blanks.; [225], Sectional title page, "The Fossil Kingdom."; [226], Blank.; [227]-313, Text.; [314], Blank.; 315-334, Indexes.

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [1]-450, Text.; [1 pg], Errata.; [1 pg], Blank.; [451]-466, "Index."

REFERENCES: BMC: 1, 144. • Henrey, *British Botanical Literature*, 1975: no. 445. • LKG: XIV 427a. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 260. • NUC: 48, 649.

BERKHEY, Johannes le Francq van.

See: Francq Van Berkhey, Johannes Le.

BERLIN, Germany. K. Friedrich-Wilhelm Universität. Mineralogisch.

Beschreibung und Eintheilung der Meteoriten auf Grund der Sammlung im Mineralogischen Museum zu Berlin. (Berlin, 1864).

See: Rose, Gustav.

Das Mineralogische Museum ... Systematisches Verzeichniss und Beschreibung seiner Schausammlungen. Von G. Rose und A. Sadebeck. (Berlin, 1874).

See: Rose, Gustav.

Studien über Meteoriten, vorgenommen auf Grund des Materials der Sammlung der Universität Berlin. Von ... C. Klein.

See: Klein, Johann Friedrich Carl.

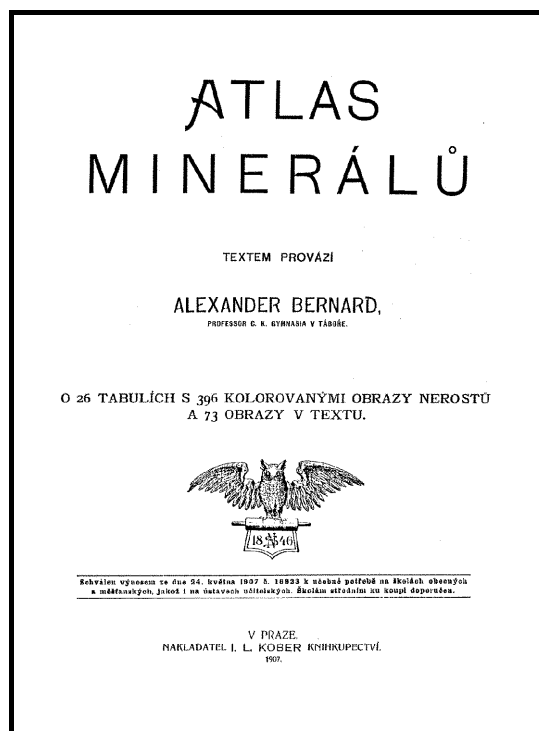
BERLIN, Germany. Königliche.

Das Mineralogische Museum ... Ein Beitrag zur topographischen Mineralogie, &c. (Berlin, 1885).

See: Hirschwald, Julius.

BERNARD, Alexander (Josef). (BORN: 1859; DIED: 1912) *Czech teacher.*

Bernard was an instructor of science at the technical highschool of Táboře.



ATLAS MINERÁLŮ

512. — Czech, 1907.

Atlas | Minerálů | Textem provází | Alexander Bernard, | Professor C.K. Gymnasia Y Táboře. | O 26 Tabulích S 396 Kolorovanými Obrazy Nerostů | A 73 Obrazy V Textu. | [ornament] | [rule] | [...2 lines of text...] | [rule] | V Praze. | Nakladatel I.L. Kober Knihkupectví. | 1907.

4°: [28], 80, [4] p., 26 chromolithographic plates (showing 396 minerals, gemstones, etc.), 73 text illus. PAGE SIZE: 300 x 240 mm.

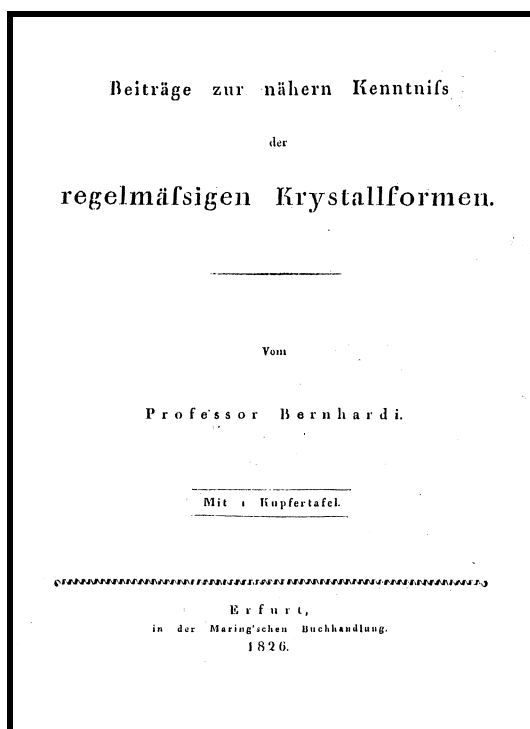
RARE. This *Atlas of Mineralogy* is an elementary textbook that is especially interesting because of its inclusion of the 26 chromolithographic plates that were previously issued in Gustav Adolf Sauer's *Mineralkunde* (Stuttgart, 1905-6) and also used in F. Leteur's *Traité Élémentaire de Minéralogie Pratique* (Paris, 1907).

REFERENCES: BL: [no copy listed].

BERNHARDI, Johann Jacob. (BORN: Erfurt, Germany, 7 September 1774; DIED: Erfurt, Germany, 13 May 1850) *German physician.*

In 1799, Bernhardt graduated with degrees in philosophy and medicine from the University of Erfurt. He was appointed in 1805 professor extraordinary of medicine at the University. He became director of the city's botanical gardens, and in 1819 became an advisor on medical matters to the state of Prussia.

REFERENCES: ADB: • DBA: I 90, 227-232. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • NDB: 2, 124 [by H. Ziegenspeck]. • Poggendorff: 1, cols. 155 & 1537. • WBL.



BEITRÄGE ZUR NÄHERN KENNTNISS, 1826

513. — German, 1826.

Beiträge zur nähren Kenntniss | der | regelmässigen Krystallformen. | [rule] | Vom | Professor Bernhardt. | [rule] | Mit 1 Kupfertafeln. | [rule] | [ornate rule] | Erfurt, | in der Maring'schen Buchhandlung. | 1826.

4°: [1]-114; 44ℓ.; [1]-86, [2] p., one folding plate (crystals). PAGE SIZE: 211 x 166 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], "Beiträge zur nähren Kenntniss der regelmässigen Krystallformen."; [4], Blank.; [5]-86, Text.; [1 pg], "Druckfehler."; [1 pg], "Erfurt, gedruckt bei J. Wilhelm Cramer."; [At end], One folding plate (211 x 230 mm).

VERY SCARCE. This is a short study into the regular forms of crystals. The plate shows 28 figures, mostly of crystals with the caption at the bottom, "Zu Bernhardt's Beiträge zur kenntniss d. Krystallformen." This monograph was reprinted in

BEROLDINGEN

Erfurt.-Academia Electoralis Moguntina Scientiarum Utilium. Abhandlungen, Neue Folge. Sammlung 1., 1828.

Related work, 1809: *Über die Grenzen der Mineralogie.* Erfurt, 1809. Listed in LKG and Poggendorff, this must be a very rare book, as no copy as been located to prepare a proper description.

REFERENCES: (1826) BMC: 1, 151. • NUC: 49, 659. • BL: [Ac.2237/4.]. • BL: [no copy listed]. • (Related, 1809) LKG: XII 204. • NUC: [no copy listed]. • Poggendorff: 1, col. 155.

BERNOULLI, Christoph.

REFERENCES: LKG: 280. • Poggendorff: 1, col. 163.

514. — German, 1811.

Geognostische Uebersicht | der | Schweiz | nebst einem systematischen | Verzeichnisse | aller in diesem Lande vorkommenden Mine- | ralkörper und Deren Fundörter. | Von | Christoph Benoulli, | Vorsteher einer Lehranstalt in Basel. | [wavy rule] | Basel | in der Schweighauserschen Buchhandlung. | Halle und Leipzig, bei Hemmerde und Schwersckhe. | [tapered rule] | 1811.

12°: xii, 228 p., one folding plate (map?).

VERY SCARCE. A geological exporation of Switzerland that includes information on mineral occurrences, giving a list of localities.

REFERENCES: BL: [990.a.33.]. • BMC: 1, 152. • LKG: XIV 510. • NUC: 50, 39.

515. — German, 1821.

Grundriß | der | Mineralogie | oder | methodischer Leitfaden | für den | mineralogischen Unterricht | auf höheren Schulanstalten. | [tapered rule] | Von Christoph Bernoulli, | Professor der Naturgeschichte in Basel. | [double rule] | Basel, bei J. Georg Neukirch. | 1821.

8°: [i]-xii, [1]-179, [1] p.

CONTENTS: [2 pgs], Title page, verso blank.; [i]-iv, "Vorwort."; [v]-xii, "Uebersicht."; [1]-179, Text.; [1 pg], Blank.

RARE. In the short introduction Bernoulli provides a synopsis of the outer, inner and physical characters of minerals and how to distinguish one mineral from another. The text (pp. 23-179) then gives a classified descriptive analysis of the individual mineral species. A derivative work.

REFERENCES: BL: [1578/5537]. • BMC: 1, 152.

BEROLDINGEN, Franz Cölestin Freiherr von. (BORN: St. Gall, Switzerland, 11 October 1740; DIED: Walshausen, ??, 8 March 1798) *Swiss geologist & mineralogist.*

Beroldingen was 'Domcapitular' first in Hildesheim, than at Osnabrück, later 'Archidiaconus' at Elze and 'Obedientarius' at Walshausen.

REFERENCES: ADB. • Baur, *Allgemeines historisches Handwörterbuch*, 1803. • DBA: I 92, 89-98. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 35. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • Poggendorff: 1, cols. 163-4. • WBI.



BEROLDINGEN

516. — German, 1778 [First edition].

Beobachtungen Zweifel und Fragen, die Mineralogie überhaupt, und insbesondere ein natürliches Mineral-System betreffend. Erster Versuch. Hannover, bey Johann Wilhelm Schmidt, 1778.

8°: [8], 203, [1] p. Title vignette. "Erster Versuch"; no more published. Running title: Beobachtungen, die Mineralogie betreffend.

RARE. Published anonymously, but attributed to Beroldingen.

REFERENCES: *Beckmann P.Ö.B.*: 9 (1778), 212. • BL: [972.g.18]. • *Leipziger allgemeines Verzeichniss*: (1778), 353. • LKG: XII 192a.

517. — German, 1792-4 [2nd edition].

Beobachtungen, | Zweifel und Fragen, | die | Mineralogie | überhaupt, | und insbesondere | ein natürliches Mineralsystem | betreffend. | [ornate rule] | Erster Versuch. | Die öligten Körper | des Mineralreichs. | Zweite durchaus vermehrte Auflage. | Von | Franz Freiherrn von Beroldingen, | Domherrn zu Hildesheim und Osnabrück. | [ornate rule] | Hannover und Osnabrück, | bei Christian Ritscher. | 1792.

[TITLE OF VOLUME TWO READS:]

Beobachtungen | ... | Zweite Versuch. | Die uralten Erd= und Steinarten nebst ihren | unmittelbaren Abkömmlingen. | ... | 1794.

2 vols. [VOL 1: 1792] 8°: [ii], [i]-xvi, [1]-457, [3] p.; [VOL 2: 1794] 8°: ★⁸ A-Aaa⁸ Bbb⁴; 388ℓ.; [i]-xvi, [1]-760 p. [1] Die öligten Körper des Mineralreichs.—[2] Die uralten Erd-und Steinarten nebst ihren unmittelbaren Abkömmlingen. PAGE SIZE: 205 x 126 mm. uncut.

SCARCE. In this work, which is of some petrological and geological importance, the author correctly assigns a common origin to mineral coal, shale, and peat, and explains gneiss as regenerated granite - an anticipation of the theory of metamorphic. [Sotheran cat 837, no 1567]

REFERENCES: (1792) BMC: 1, 152. • Hoover Collection: no. 119. • LKG: XII 192b. • NUC: 50, 130-1 [NB 0370716]. • Roller & Goodman, *Catalogue*, 1976: 1, 108. • BL: [990.f.23.]. • BL: [972.g.18]. • (Related, 1788) BMC: 1, 152.

• LKG: XIV 280. • NUC: 50, 130 [NB 0370715]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 189.

518. — German, 1788.

Bemerkungen auf einer Reise durch die Pfälzischen und Zweybrück'schen Quecksilber-Bergwerke von F. Freiherr von Beroldingen. Herausgegeben und mit einer Vorrede begleitet von J.D. Brandis. Berlin, Nicolai, 1788.

8°: [16], [1]-240 p., one hand-colored folding map.

RARE. Edited and forward written by Joachim Dietrich Brandis [1762-1846], this work describes the author's trip in Germany to examine various mining works. The practical petrographic map provides view of the area, with beautiful 'Kartusche' and shows the area of Birkenfeld, Simmern, Oberwesel, Mainz, Rhein und Main, Mannheim, and Kaiserlautern.

REFERENCES: BMC: 1, 152. • LKG: XIV 280. • NUC: 50, 130 [NB 0370715]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 189.

519. — German, 1791.

Die Vulkane älterer und neuerer Zeiten. Physikalisch und mineralogisch betrachtet von Franz von Beroldingen ... Mannheim, Schwann und Götz, 1791.

2 parts in one volume. [Part 1] 8°: [2], 293, [18] p. [Part 2] 8°: xxii, 406, [34] p. PAGE SIZE: 190 x 120 mm.

VERY SCARCE. Volcanoes.

REFERENCES: BMC: 1, 152. • Hoover Collection: no. 120. • LKG: XIII 280. • NUC: 50, 131.

BERTELE, Georg Augustin. (BORN: Ingolstadt, Bavaria, Germany, 27 August 1767; DIED: Landshut, Austria, 19 July 1818) *German physician & naturalist.*

Bertele studied natural history and medicine in Ingolstadt, Würzburg and at the Bergakademie in Freiberg. In 1792 he became a physician and in the following year he became a professor at the University of Ingolstadt. There, Bertele taught chemistry, mineralogy, pharmacy, pharmacology, botany and zoology. He was a member of the Mineralogischen Sozietät in Jena.

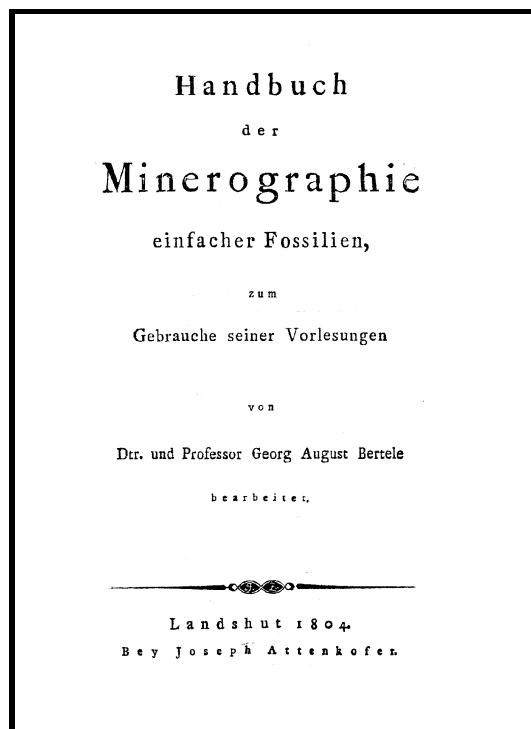
REFERENCES: DBA: I 92, 202-203. • DBE: 1, 481. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • NDB: 2, 149 [by M. Schmid]. • Poggendorff: 1, col. 164. • WBI.

520. — German, 1804.

Handbuch | der | Minerographie | einfacher Fossilien, | zum | Gebrauche seiner Vorlesungen | von Dtr. und Professor Georg August Bertele | bearbeitet. | [ornate rule] | Landshut 1804. | Bey Joseph Attenkofer.

8°: π^8 B⁸ C⁴ 1-33⁸ 34⁴; 289 ℓ .; [i]-xxxiv, [6], [1]-536, [2] p. PAGE SIZE: 200 x 115 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Vorrede."—signed Bertele, 13 January 1804.; [vii]-xxxiv, "Inhaltsanzeige | in | Verbindung der wichtigsten neuern, vözüglich der | französischen Benennungen."; [6 pgs], "Alphabetisches | Verzeichniss | aller | Arten und Gattungen der einfachen Mineralien."; [1]-529, Text.; 530-536, "Nachtrag."; [2 pgs], "Anzeige | einiger vorzüglicher sinnstörender Druckfehler."



HANDBUCH DER MINEROGRAPHIE, 1804

VERY SCARCE. In the forward, Bertele records that he was inspired to write this work as a result of studying the recent mineralogies of EMMERLING, ESTNER and REUSS. He felt that his effort was more complete and understandable. The first portion of the text is an introduction to mineralogical science. The second and largest part is a descriptive mineralogy, organized along the chemical classification suggested by D.L.G. KARSTEN's *Mineralogischen Tabellen* (Berlin, 1800). An alphabetical list of all the mineralogical species contained is included at the beginning of the work.

REFERENCES: BL: [no copy listed]. • GV (1700-1910): 14, 13. • LKG: XII 165. • NUC: [no copy listed].

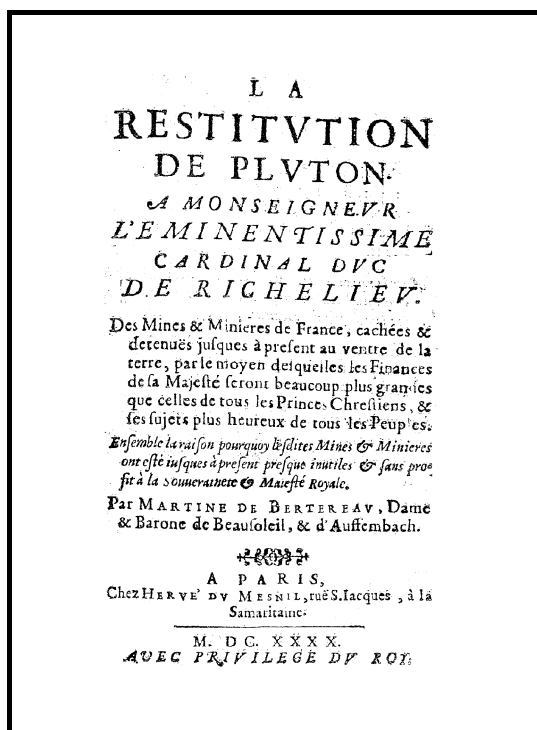


BERTEREAU

BERTEREAU, Martine de Baronne de Beausoleil. (BORN: c1601; DIED: 1640) *French woman mineralogist.*

Martine de Bertereau, an expert dowser, and her husband Jean de Chastelet, Baron de Beausoleil et d'Auffenbach, an expert in mineralogy and mining, made a name for themselves in 17th century Europe. Using a variety of hazel branches and metal rods, Martine reportedly located rich mineral and water deposits. But when the infamous French Cardinal Richelieu caught wind of exactly how Martine was prospecting, he pitched the couple into prison, along with two of their kids.

REFERENCES: ABF: I 1052,243, 245-248. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefler): 5, cols. 696-7. • WBI.



LA RESTITUTION DE PLUTON, 1640

521. — French, 1640.

La | Restitvtion | De Pluton. | A Monseigneur | L'Eminentissime | Cardinal Dvc | De Richelieu. | Des Mines & Minieres de France, cachées & | detenues jusques à present au ventre de la | terre, | pare le moyen desqueiles les Finances | de la Majesté seront beaucoup plus grandes | que celles de tous les Prince Chrestiens, & | ses sujets plus heureux de tous les Peuples. | Ensemble la raison pourquoy les dites Mines & Minieres | ont esté iusques à present presque inutiles & sans pro- | fit à la souueraineté & Maiesté Royale. | Par Martine de Bertereau, Dame | & Barone de Beausoleil & d'Auffembach. | [rule] | A Paris, | Chez Herve' dv

Mesnil, ruë S. Iacques, à la | Samaritaine. | [rule] | M. DC. XXXX. | Avec Privilege Dv Roi.

8°: a⁸ A-L⁸; 96ℓ.; [16], [1]-171, [5] p., 7 woodcuts, and an engraved coat of arms. Pages [103]-[109] contain astrological charts. Cardinal Richelieu's coat of arms on plate before text. Head pieces, initials. PAGE SIZE: 165 x 95 mm.

CONTENTS: [2 pgs/=a1], Title page, verso privilege.; [10 pgs/=a2r-a6v], Dedication to Cardinal Richelieu.; [2 pgs/=a7], "...Sonnet."—signed De Bertereau.; [1 pg/=a8r], Blank.; [1 pg/=a8v], Richelieu's Coat-of-Arms.; [1]-171 (=A1-L6r), Text.; [4 pgs/=L6v-L8r], "Privilege | du Roy."; [1 pg/=L8v], Blank.

VERY RARE. Work on mining and mineralogy authored by the only documented woman mineralogist of her time. She married Jean Du Chatelet, Baron Beausoleil, inspector of mines of the German empire and together they visited the mines of South America, Hungary and Germany. When Beausoleil secured the authorization to survey the whole of the French territory for the discovery of mines and minerals, his wife accompanied him in his travels throughout France. This book is the outcome of their work. Written in the form of an appeal to Cardinal Richelieu to open and operate the French mines, it contains a long list of these mines, discusses all minerals found, speaks of different sciences to be studied by a mining expert. Ultimately, the author was imprisoned by order of Richelieu, because of suspicion of witchcraft in the use of divining rods. She died in prison.

French, 1751: This work was reprinted in A.A. BARBA's *Metallurgie, ou, l'Art de tirer et de purifier les Métaux*, Paris, 1751, 2, 56-151 [which see entry under Barba].

REFERENCES: BL: [523.b.26.(5.)]. • Brunet: 1, 816. • *Freilich Sale Catalog*: no. 53. • Larousse: 2, 448. • NUC: 50, 337 [NB 0375841]. • Roller & Goodman, *Catalogue*, 1976: 1, 108. • Ward & Carozzi, *Geology Emerging*, 1984: no. 190.

BERTHOUT, Johann Paul Vanberchem.

See: Vanberchem-berthout, Johann Paul.

BERTRAND, Bernard Nicolas. (BORN: Paris, France, 1715; DIED: Paris, France?, 29 September 1780) *French physician.*

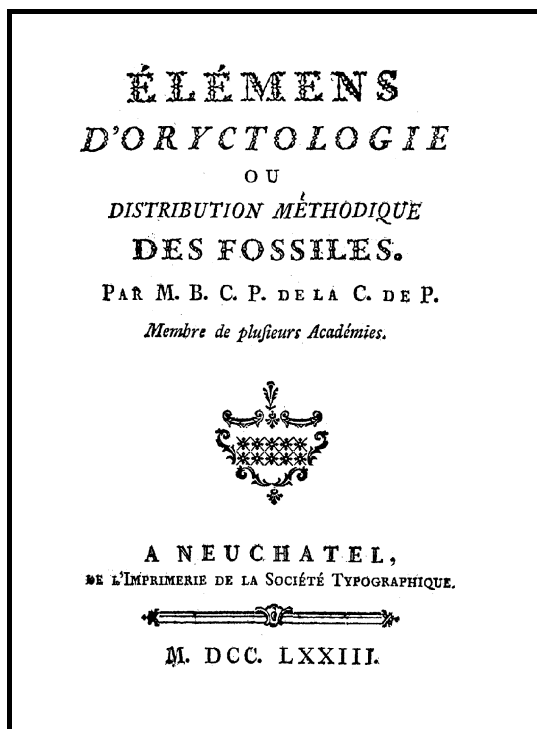
Bertrand was the son of the physician and long time professor of surgery and pharmacy at the University of Paris, Thomas Bernard Bertrand [1682-1751]. Bernard followed in his father's profession and became a medical doctor. He also was a counselor to the rulers of Poland.

REFERENCES: ABF: I 96, 364. • Lambrecht & Quenstedt, *Catalogus*, 1938: 35. • Poggendorff: 1, col. 170. • WBI.

522. — French, 1773.

Éléments | D'Oryctologie | Ou | Distribution Méthodique | Des Fossiles. | Par M.B.C.P. de la C. de P. | Membre de plusieurs Académies, | [ornament] | A Neuchatel, | de l'Imprimerie de la Société Typographique. | [ornate rule] | M.DCC.LXXIII.

8°: A-M⁸ N⁴ (tables bound in after M1); 100ℓ.; [i]-xxxix, [1], [1]-137, [1] p., 16 folding tables (labeled I-XVI), [i]-xxi, [1] p. PAGE SIZE: 185 x 116 mm.



ÉLÉMENTS D'ORYCTOLOGIE, 1773

CONTENTS: [i-ii], Title page, verso blank.; [iii-iv], "Épître."—dated 15 January 1773.; [v]-xxxix, "Éléments | D'Oryctologie. | [rule] | Discours Préliminaire."; [1 pg], Blank.; [1]-137, Text.; [1 pg], "Tables Méthodiques, &c.*"; [16 folding tables]; [i]-iv, "Quatre | Tables Abrégées | ..."; v-xiii, "Table | Des Matières Et Des Sections."; xiv-xxi, "Table Alphabétique Des Fossiles."; [1 pg], Blank.

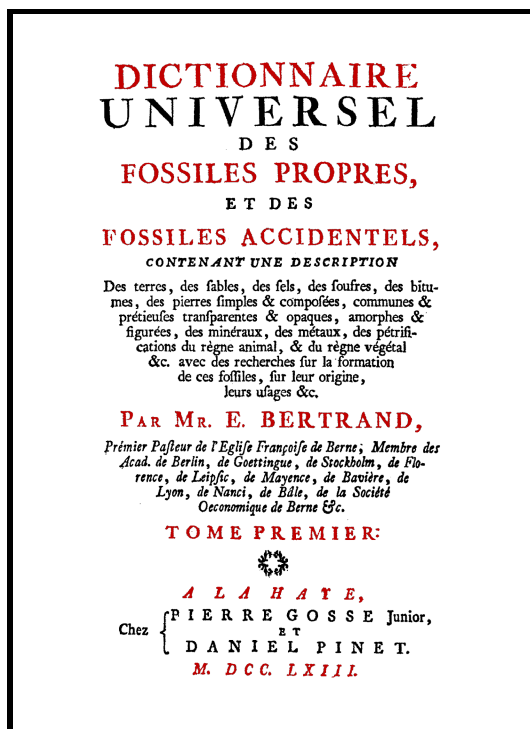
SCARCE. Published with only initials on the title page to indicate the author, these stand for: Monsieur Bertrand, Conseiller Palatin de la Cour de Pologne. This small volume is a popular-style summary of mineralogical science designed to serve those who desired a ready made plan on which to arrange their cabinet of fossils and minerals. It includes a justification for the science of mineralogy, a brief summary of the science's theory, a survey of mineralogical literature and a systematic enumeration and description of minerals. The system outlined is based upon the standard classes.

REFERENCES: BL: [953.g.2.]. • BMC: 1, 154. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 50. • LKG: XII 79. • NUC: 50, 573 [NB 0381943]. • Roller & Goodman, *Catalogue*, 1976: 1, 111. • Ward & Carozzi, *Geology Emerging*, 1984: no. 195.

BERTRAND, Élie. (BORN: Obbe, Waadtland, Switzerland, 1712; DIED: 1777) *Swiss naturalist*.

From 1744, Bertrand was pastor of a church in Berne. He held memberships in the scientific academies of Stockholm, Berlin, Florence, Lyons. He was a founder of the Economic Société in Verdun, France.

REFERENCES: ABF: I 96, 380-384. • Feller, *Biographie Universelle*, 1851. • Lambrecht & Quenstedt, *Catalogus*, 1938: 35. • Nouvelle *Biographie Générale* (Hoefer). • Poggendorff: 1, col. 170. • Sarjeant, *Geologists*, 1980: 2, 542.



DICTIONNAIRE UNIVERSEL DES FOSSILES, 1763

• WBI. • *World Who's Who in Science*: 167.

523. — French, 1763 [Issue A].

[In red:] Dictionnaire | [in black:] Universel |
Des | [in red:] Fossiles Propres, | [in black:] Et
Des | [in red:] Fossiles Accidentels, | [in black:]
Contenant Une Description | Des terres, des fables,
des sels, des souffres, des bitu- | mes, des pierres
simples & composées, communes & | précieuses,
transparentes & opaques, amorphes & | figurées,
des minéraux, des métaux, des pétrifi- | cations
du règne animal, & du règne végétal | &c. avec
des recherches sur la formation | de ces fossiles,
sur leur origine, | leurs usages &c. | [in red:] Par
Mr. E. Bertrand, | [in black, 5 lines of titles and
memberships] | [in red:] Tome Premier [-Second]. |
[in black, ornament] | [in red:] A La Haye, | [in black,
the next three lines braced on the left-hand side by,
"Chez {"] Pierregosse Junior, | Et | Daniel Pinet.
| [in red:] M. DCC. LXIII.

2 vols., sometimes bound in one. [VOL 1] 8°: *2
A-Q⁸; 130ℓ.; [4], 1-256 p. Title in red and black. [VOL
2] 8°: π² A-Q⁸; 130ℓ.; [4], 1-256 p. PAGE SIZE: 208 x
125 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page,
"Dictionnaire | Oryctologique | Universel. | [double
rule] | Tome Premier," verso blank.; [2 pgs], Title page,
verso blank.; [i]-iv, Dedication to King Frederic V, signed
E. Bertrand.; [v]-xxxij, "Discours | Préliminaire."; 1-284,

BERTRAND

Text.

[Vol 2] [2 pgs], Half title page, "Dictionnaire | Oryctologique | Universel. | [double rule] | Tome Second," verso blank.; [2 pgs], Title page, verso blank.; 1-256, Text.

SCARCE. An early comprehensive dictionary defining terms used in the 18th century study of oryctology, which by today's convention would include all of the earth sciences such as geology, mineralogy, crystallography, paleontology, and vulcanology. In the alphabetical list, various terms deal with earths, salts, sulfurs, bitumens, petroleum, simple and complex stones, common and precious gems, minerals, metals, petrifications of animals and plants, the latest theories on their formation, and their uses. In many instances a substantial definition is provided, which shows Bertrand's good knowledge of the subject. Volume one covers words beginning with the letters A to L, while volume 2 continues M to Z.

Another issue: La Haye, 1764.

REFERENCES: *Berlinische Sammlungen*: 1, 238 & 9, 225. • BL: [234.k.8.]. • BMC: 1, 155. • Cobres, *Deliciae Cobresianæ*, 1782: 1, 18 ["Ein nützliches Buch."]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 17. • *Göttingische gelehrte Anzeigen*: 1763, 1166. • LKG: VIII 3. • Roller & Goodman, *Catalogue*, 1976: 1, 111. • Ward & Carozzi, *Geology Emerging*, 1984: no. 193.

524. 1763: Dictionnaire | Universel | Des | Fossiles Propres, | Et Des | Fossiles Accidentels | Contenant Une | Description Des Terres, | des Sables, des Sels, des Soufres, des Bitumes; des | Pierres simples & composées, communes & précieux | ses, transparentes & opaques, amorphes & figurées, | des minéraux, des métaux, des pétrifications du | regne animal, & du regne végétal & c. avec des | recherches sur la formation de ces Fossiles, sur leur | origine, leurs usages &c. | Par Mr. E. Bertrand, | [...5 lines of titles and memberships...] | [ornament] | A Avignon, | Chez Louis Chambeau, Imprimeur-Libraire; | près les RR. PP. Jésuites. | [ornate rule] | M. DCC. LXIII.

8°: *8 C-Z⁸ Aa-Qq⁸ Rr⁷; 319ℓ.; [i]-xxxij, [1]-606 p. Head- and tailpieces. PAGE SIZE: 210 x 130 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii-iv], Dedication to Frederic V, signed E. Bertrand.; [v]-xxxij, "Discours | Préliminaire."; [1]-606, Text.

SCARCE. Pirated? text of the same work published in the same year at La Haye.

REFERENCES: *Berlinische Sammlungen*: 1, 238 & 9, 225. • BL: [1509/1746.]. • *Göttingische gelehrte Anzeigen*: 1763, 1166. • Patsch, *Katalog der Bibliothek*, 1851: no. 143a.

525. — French, 1766.

Recueil | De | Divers Traités | Sur | L'Histoire Naturelle | De La Terre | Et Des Fossiles. | Par M.E. Bertrand, ci-devant premier Pasteur de l'Eglise | [...6 lines of titles and memberships...] | [ornament] | A Avignon, | Chez Louis Chambeau, Imprimeur-Libraire, | près les RR. PP. Jésuites. | [ornate rule] | M. DCC. LXVI.

8°: a⁴ A-Z⁴ 2A-2Z⁴ 3A-3Z⁴; 280ℓ.; [8], [1]-552 p. PAGE SIZE: 250 x 185 mm.

CONTENTS: [2 pgs], Half title page, "Recueil | De | Divers Traités | Sur | L'Histoire Naturelle | De La Terre | Et Des Fossiles," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], Dedication to King Stanislas Auguste of Poland.; [2 pgs], "Avertissement | Du Libraire."; [1]-541, Text.; [542]-552, "Table | Des Titres | Et Des | Principales Matières | De Cet Ouvrage."

RECUEIL DE DIVERS TRAITÉS SUR L'HISTOIRE NATURELLE DE LA TERRE ET DES FOSSILES.

Par M. E. BERTRAND, ci-devant premier Pasteur de l'Eglise François de Berne, & Secrétaire de la Société Économique, maintenant Conseiller de la Cour du Roi de Pologne; des Académies de Berlin, de Göttingue, de Suede, de Florence, de Leipzig, de Mayence, de Munich, de Lyon, de Nancy, de Bâle; des Sociétés d'Agriculture de Paris, de Lyon, de Rouen, de Dublin, &c. &c.



A AVIGNON,
Chez LOUIS CHAMBEAU, Imprimeur - Libraire,
près les RR. PP. Jésuites.
M. DCC. LXVI.

RECUEIL DE DIVERS TRAITÉS, 1766

VERY SCARCE. A reprint collection of six of Bertrand's earlier works including: Mémoire sur la structure intérieure de la terre – Essai sur les usages des montagnes – Mémoires historiques et physiques sur les tremblemens de terre – Essai d'une distribution methodique des fossiles – Essai de minérographie, et d'hydrographie du Canton de Berne – Lettre sur les inondations du Nil, et l'usage des montagnes de l'Abissinie – Lettre sur la diminution les mers, et l'origine de montagnes. An index at the end provides a listing of the titles of the works together with a breakdown of the important sections in each.

Perhaps the most important monograph contained in the collection is the "Essai de minérographie, et d'hydrographie du Canton de Berne." This is the first "Mineralography," which is a alphabetical listing of the Cantons throughout Switzerland, with details given of the minerals and therapeutic springs that may be found at each location. When this work was written, this was a quite new, and useful format for describing the mineral wealth of a geographical area.

Another issue: Identical issue, with the date of 1767 is also recorded.

Contents: I. Mémoires sur la structure intérieure de la Terre (in 3 parts, pp. 1-104). II. Essai sur les usages des montagnes (pp. 105-222). III. Mémoires historiques et physiques sur les tremblemens de terre (pp. 223-380). IV. Essai d'une distribution methodique des fossiles (pp. 381-434). V. Essai de minérographie, et d'hydrographie du canton de Berne (pp. 435-486). VI. Essai de minérographie du canton de Berne, systematiquement rangée (pp. 487-496). VII. Catalogue du Cabinet d'histoire naturelle de M.

E. Bertrand (pp. 497-508). VIII. Lettre sur les inondations du Nil, et l'usage des montagnes de l'Abissinie (pp. 509-526). IX. Lettre sur la diminution des mers, et l'origine des montagnes (pp. 527-541). Table des matières (pp. 542-552).

REFERENCES: *Berlinische Sammlungen*: 3, 636. • BMC: 1, 155. • Cobres, *Deliciae Cobresianæ*, 1782: 2, 688 ["Bekannt."]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 287. • Hoover Collection: no. 121. • LKG: VI 39. • Ward & Carozzi, *Geology Emerging*, 1984: no. 194.

526. — French, 1752 [First edition].

Mémoires | Sur | La Structure Intérieure | De La Terre, | Par | M. Elie Bertrand. | [...4 lines of titles and memberships...] | [ornament] | A Zuric, | [rule] | Chez Heidegguer Et Compagnie | MDCCLII.

8°: A-H⁸ K⁴; 76L; [1]-152 p., 10 plates.

CONTENTS: [1-2], Title page, verso 3 lines of text.; [3]-[6], Dedication.; 7-152, Text.; [At end], 10 plates.

RARE. Collection of four science reports of which the three first treat the mineralogical and geological structure of the earth's interior. The last is a letter on the features of oceans. The 10 plates at the end show one map and 9 diagrams.

REFERENCES: LKG. • Ward & Carozzi, *Geology Emerging*, 1984: no. 191.



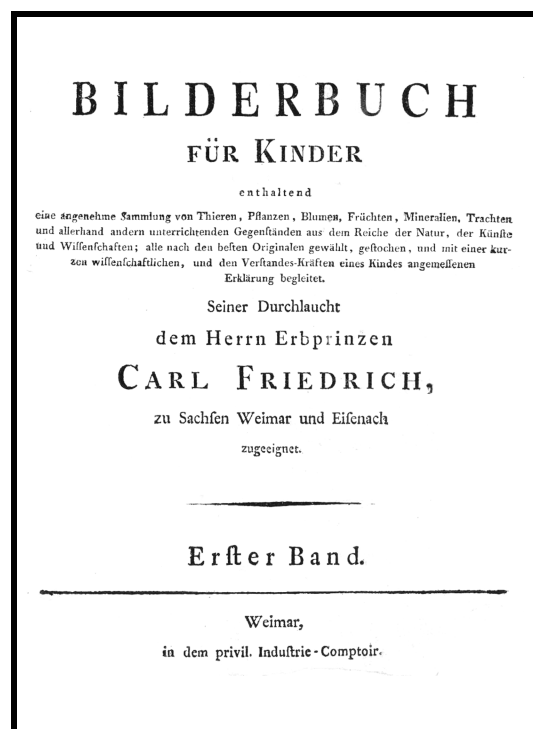
BERTUCH

BERTUCH, Friedrich Justin (Johann). (BORN: Weimar, Germany, 30 September 1747; DIED: Weimar, Germany, 3 April 1822) *German publisher.*

Bertuch was a successful publisher, who founded the famous Landes-Industrie-Comptoirs in Weimar, which produced works of geography as well as fine maps.

REFERENCES: ADB: 2, 552-53. • DBA: I 93, 342-356. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Heinemann, A. von, "Friedrich Justin Johann Bertuch," *Rheingauer Drucke*, 2 (1950), ?? . • Heinemann, A.v., *Ein Kaufmann der Goethezeit. Friedrich Justin Bertuch's Leben und Werk*. Weimar, H. Böhlau Nachfolger, 1955. 194 p., illust., index. • Hohenstein, Siglinde, *Friedrich Justin Bertuch (1747-1822)—bewundert, beneidet, umstritten. Übersetzer mit Verdiensten, Dichter ohne Talent, in Weimar kluger Verwalter der fürstlichen Privatschatulle, erfolgreicher Herausgeber und Verleger, Freund Goethes ein Kapitalist und*

Philanthrop der Aufklärung. Mainz, Gutenberg-Museum, c1985. 297 p., illus. [Catalog of the exhibition held at the Gutenberg-Museum in Mainz, Nov. 8.-Dec. 30, 1985.]. • Kaiser, Gerhard R. and Siegfried Seifert, eds., *Friedrich Justin Bertuch (1747-1822). Verleger, Schriftsteller und Unternehmer im klassischen Weimar*. Herausgegeben von Gerhard R. Kaiser und Siegfried Seifert; redaktionelle Mitarbeit, Christian Deuling. Tübingen, M. Niemeyer, 2000. viii, 719 p., illus. [Papers from a conference held Sept. 28th-Oct. 1, 1997 and sponsored by the Deutsche Forschungsgemeinschaft.; ISBN 3484107960]. • NDB: 2, 171-173. • Poggendorf: 1, col. 172. • Strobach, E., "Das Bertuchische Bilderbuch und seine Ausgabe," *Philobiblon*, 13 (1969), 255-?. • WBI.



BILDERBUCH FÜR KINDER, 1790

527. — German & French, 1790-1810 [First edition].

Bilderbuch | für Kinder | enthaltend | eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Trachten | und allerhand andern unterrichtenden Gegenständen aus dem Reiche der Natur, der Künste | und Wissenschaften; alle nach den besten Originalen gewählt, gestochen, und mit einer kur- | zen wissenschaftlichen, und den Verstandes-Kräften eines Kindes angemessenen | Erklärung begleitet. | Seiner Durchlaucht | dem Herrn Erbprinzen | Carl Friedrich, | zu Sachsen Weimar und Eisenach | zugeeignet. | [tapered rule] | Erster Band. | [rule] | Weimar, | in dem privil. Industrie-Comptoir.

BERTUCH

7 vols. usually bound in 6. [VOL 1, issue A: 1790] 4°: [8] p., 100*l.*, [8] contents and errata p., 100 hand-colored plates. [VOL 2: 1795] 4°: 100*l.*, [6] contents p., 100 hand-colored plates. [VOL 3: 1798] 4°: 100*l.*, [8] contents p., 100 hand-colored plates. [VOL 4: 1802] 4°: 200*l.*, [8] contents p., 100 hand-colored plates. [VOL 5: 1805] 4°: 200*l.*, [8] contents p., 100 hand-colored plates. [VOL 6: 1808] 4°: 50*l.*, 50 hand-colored plates. [VOL 7: 1810] 4°: 50*l.*, 50 hand-colored plates. PAGE SIZE: 245 x 205 mm.

RARE. REWORK COMMENTARY: Containng the first issue of volume one, dated 1790. One of the great illustrated juvenile series of the nineteenth century, Bertuch's *Picture Book for Children* is a magnificently illustrated childrens encyclopaedia of everything that was the largest publishing venture ever undertaken by Bertuch. Issued by monthly subscription the completed work published between 1790 and 1830 consisted of 237 parts with a total of 1,185 hand-colored copper engravings. A complete set cost 120 Thaler or about twice the yearly salary of a common worker, yet by using the subscription method, the publiser was able to sell many sections. The *Bilderbuch* contains a pleasant collection of well illustrated natural history and science articles about animals, plants, flowers, fruits, minerals, insects. It is a substantial work, very popular in its time, as a tool for instruction through words and pictures. The publication history is complex because it was one of the largest publication projects of that time. The most complete sets of the *Bilderbuch* are composed of 12 volumes with accompanying text in German and French. The 12 volumes are structured in 14 Themes: quadruped animals, birds, fish, insects, plants, humans, worms, shells, corals, amphibian, minerals, buildings, antiquities and mixed objects. In 1796 Bertuch began publishing the accompanying texts, helped by Karl Friedrich Funke [1752-1807]. The whole project becoming the first encyclopedia about nature and earth. Today, this work is sought after for the many quaint hand-colored illustrations it contains.

This remarkable children's work, which was being reissued even as the first edition was still bein published has a very difficult bibliography. This seven volume set usually contains a third revision of the first volume published in 1792, which prints Bertuch's name on the title page for the first time. The text has been reprinted with the French appearing with the German from page one, and all previous errata having been corrected. This is normally(?) the series that constitutes the first edition of Bertuch's *Bilderbuch*. Volumes 1-3 have German and French on alternate pages, volumes 4 through 7 are written in German, French, English, and Italian. Volumes 6 and 7 were prepared by Carl Bertuch, son of the author. Titles vary slightly from volume to volume.

REFERENCES: Brüggemann & Ewers, *Handbuch*, 1982: no. 85. • Gumuchian, *Les Livres De L'Enfance*, 1930: no. 611. • *Magazin für das Neueste aus der Physik und Naturgeschichte*: 9 (1794), 2 Stuck, p. 153-5. • NUC. • Rümman, *Alte Deutsche Kinderbücher*, 1937: 33. • Strobach, E., "Das Bertuchische Bilderbuch und seine Ausgabe," *Philobiblon*,

13 (1969), 255-?. • Wegehaupt, *Alte deutsche Kinderbücher*, 1979: nos. 131-133.

528. Another edition, vol. 1, 1792: Bilderbuch für Kinder, enthaltend eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Trachten ... [With an added titlepage in French] Porte-feuille des Enfants mélange intéressant d'Animaux, Plantes, Fleurs, Fruits, Minéraux, Costumes Antiquités et autres Objets instructifs et amusants pour la Jeunesse; choisis et gravés sur les meilleurs originaux, avec de courtes Explications scienifiques et proportionnées l'entendement d'un Enfant. Redigé par F.J. Bertuch. Weimar: Bureau d'Industrie, 1792.

[VOL 1, issue B: 1792] 4°: [10] p., 100*l.*, [8] contents and errata p., 100 hand-colored plates. PAGE SIZE: 245 x 205 mm.

RARE. A second version of volume one. The German title-page is exactly as the previous issue of 1790. The text is also from this previous issue with the French supplementing the German after number 46. The errata have still not been corrected.

REFERENCES: NUC.

529. Another edition, vol. 1, 1792: Bilderbuch für Kinder, enthaltend eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Mineralien, Trachten und allerhand andern unterrichtenden Gegenständen aus dem Reiche der Natur, der Künste und Wissenschaften; alle nach den besten Originalen gewählt, gestochen, und mit einer kurzen wissenschaftlichen, und den Verstandeskräften eines Kindes angemessenen Erklärung begleitet [!]. Von F.J. Bertuch. Weimar, Verlag des Industrie-Comptoir, 1792-1810.

[VOL 1, issue C: 1792] 4°: [10] p., 100*l.*, [8] contents p., 100 hand-colored plates. PAGE SIZE: 245 x 205 mm.

RARE. A third version of volume one.

REFERENCES: NUC: 50, 632-33. • Pilz, *Pilz*: 346-50. • Rümman, *Alte Deutsche Kinderbücher*, 1937: 33. • Wegehaupt, *Alte deutsche Kinderbücher*, 1979: nos. 131-133.

530. Another edition, 1792-1830: Bilderbuch für Kinder, enthaltend eine angenehme Sammlung von Thieren, Pflanzen, Blumen, Früchten, Mineralien, Trachten und allerhand andern unterrichtenden Gegenständen aus dem Reiche der Natur, der Künste und Wissenschaften; alle nach den besten Originalen gewählt, gestochen, und mit einer kurzen wissenschaftlichen, und den Verstandeskräften eines Kindes angemessenen Erklärung begleitet. Weimar, Verlag des Landes-Industrie-Comptoirs Halbleder, 1798-1830.

12 vols. [VOL 1: 1792] 4°: [16] p., 100 hand-colored plates, [6] p. [VOL 2: 1803] 4°: [2] p., 100 hand-colored plates, [6] p. [VOL 3: 1798] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 4: 1802] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 5: 1805] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 6: 1807] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 7: 1810] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 8: 1813] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 9: 1816] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 10: 1821] 4°: [2] p., 100 hand-colored plates, [8] p. [VOL 11: 1824] 4°: [2] p., 100 hand-colored plates, [6] p. [VOL 12: 1830] 4°: [2] p., 86 hand-colored plates. with a total of 1184 hand-colored plates of a large variety of subjects. PAGE SIZE: 270 x 220 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [14 pgs], Foreword in German and French.; [100 plates]; [6 pgs], Contents.

[Vol 2] [2 pgs], Title page, verso blank.; [100 plates]; [6 pgs], Contents.

[Vol 3] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.

[Vol 4] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.

[Vol 5] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.

- [Vol 6] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.
 [Vol 7] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.
 [Vol 8] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.
 [Vol 9] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.
 [Vol 10] [2 pgs], Title page, verso blank.; [100 plates]; [8 pgs], Contents.
 [Vol 11] [2 pgs], Title page, verso blank.; [100 plates]; [6 pgs], Contents.
 [Vol 12] [2 pgs], Title page, verso blank.; [86 plates].
 RARE. The final, most elaborate appearance of Bertuch's *Bilderbuch*, containing a total of 1,185 hand-colored plates on all manner of subjects, including minerals.
 REFERENCES: BL: [739.c.8-19]. • NUC.



TAFELN, 1801

Tafeln

531. — German, 1801 [First edition].

Tafeln | der allgemeinen | Naturgeschichte | nach ihren drey Reichen | Nebst | vollständiger Enumeration | aller bis jetzt bekannten Natur-Körper, und synoptischer Uebersicht | ihrer Kennzeichen. | Herausgegeben | von | Friedr. Just. Bertuch, | [...6 lines of titles and memberships...] | [tapered rule] Mineral-Reich. | [tapered rule] Erster Theil. | [tapered rule] Weimar, | im Verlage des Industrie-Comptoirs | 1801.

4°: [6], 34 p.; [8], 82 p.; [6], 48 p., 24 hand-colored plates.

RARE. Consists of a description of the three realms of nature, i.e. minerals, plants, and animals. Each of these kingdoms was described in two "Hefte," each containing 4 plates; therefore, the section on minerals was accompanied by a total of 8 plates. This work was published while the author's *Bilderbuch* was being published, and the plates are probably extracted from that large work.

Contents: [Vol 1] Einleitung. – Enumeration der Classen, Ordnungen, Unter-Ordnungen, Arten, und Abänderungen des Mineral-Reichs. – Tafeln des Mineral-Reichs. – Erklärung der Mineralien-Abbildungen. – Synoptische Tabellen des Mineral-Reichs. – Enumeration der Classen, Ordnungen, Unter-Ordnungen [...] (Forts.). – Tafeln des Mineralreichs (Forts.). – Erklärung der Mineralien-Abbildungen. – Synoptische Tabellen des Mineral-Reichs (Forts.).

[Vol 2] Enumeration der Classen, Ordnungen, Familien, Gattungen und Arten des Gewächs-Reichs. – Tafeln des Gewächs-Reichs. – Synoptische Tabellen des Gewächs-Reichs. – Enumeration der Classen, Ordnungen, Familien [...] (Forts.). – Tafeln des Gewächs-Reichs (Forts.).

[Vol 3] 1. Abschnitt. Säuge-Thiere. Enumeration der Classen, Ordnungen, Familien, Gattungen und Arten des Thier-Reichs. – Tafeln der Säuge-Thiere. – Synoptische Tabellen des Thier-Reichs. – Enumeration der Classen, Ordnungen, Familien [...] (Forts.). – Tafeln des Thier-Reichs. – Synoptische Tabellen des Thier-Reichs (Forts.).

REFERENCES: NUC: [no copy listed].

532. Enlarged edition, 1806: Tafeln der allgemeinen Naturgeschichte, nach ihren drey Reichen, nebst vollständiger Enumeration aller bis jetzt bekannten Natur-Körper und synoptischer Übersicht ihrer Kennzeichen. Neue umgearbeitet Auflage. Mit ausgemalten Kupfern. Weimar, Verlag des Industrie-Comptoirs, 1806.

3 parts. 4°: 60 hand-colored plates.

VERY RARE. An enlarged edition, published in 15 "Hefte," each with 4 plates. Containing, I. Mineralreich. Oryktognosie. Orognozie, oder Gebirgskunde. II. Gewächsreich. Pflanzen ohne Luftgefäße. Pflanzen mit Luftgefäße. III. Thierreich. 1st Classe, Säugthiere. 2nd Classe, Vögel. 3rd Classe, Reptilien. 4th Classe, Fische. 5th Classe, Mollusken. 6th Classe, Krustaceen. 7th Classe, Würmer. 8th Classe, Insecten. 9th Classe, Zoophyten.

REFERENCES: BL. • BMC: 1, 155. • Dennstedt, M.E.H., *Die Chemie in der Rechtspflege*. Leipzig, Akademische verlagsgesellschaft m.b.h., 1910. [i]-x, [1]-422 p., 27 plates, illus. • LKG: XII 219. • NUC: [no copy listed].

533. — German, 1802.

Mikroskopisches Kabinet enthaltend Gegenstände aus allen drey Natur-Reichen; zum genaueren Studium der Natur und ihrer Wunder herausgegeben von F. J. Bertuch, H.S. Weimar. Legat. Rathe, und mehrerer gelehrten Gesellschaften Mitglie. Erste Lieferung. Taf. I-X. Weimar, im Verlage des Landes-Industrie-Comptoirs. 1802.

8°: viii, 40 p., 10 hand-colored plates.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Einleitung."; [v]-viii, "Mikroskopisches Kabinet. "; Taf. I. No. 1-5. Krystalle (Grünspan, Küchensalz, Salmiak, etc.); Taf. II. No. 6-10. Staubkörner (Orchisblume, Fichte Malve); Taf. III. No. 11-15. Staubkörner (Glasfaden, Menschenhaar, Seetang, etc.); Taf. IV. No. 16-20. Staubkörner (Milch, Blut, Gummigutt, etc.); Taf. V. No. 21-25. Blätter (Bastard-Indig, Johanniskraut Blattstückchen); Taf. VI. No. 26-30. Gliederhaare (Staubfäden der Tradescantie); Taf. VII. No. 31-35.

BERZELIUS

Wespennestes, Hornissennestes, Röhren.; Taf. VIII. No. 36-40. Silberfarbner Ueberzug des Oleasters.; Taf. IX. No. 41-45. Zarte Bruchstücke (Kalkspath, Bleyglanz, etc.); Taf. X. No. 46-50. Kleine Erdschneckchen, Schuppen.

VERY RARE. All published? This is an illustrated work of natural objects examined under the microscope. Included in this first section is a description with illustrations of various crystallized mineral specimens.

REFERENCES: BL. • NUC.

Das Mineralreich; oder charakterisirende Beschreibung aller zu Zeit bekannten Mineralkörper, als Commentar zu den Bertuchschen Tafeln der allgemeinen Natur-Geschichte. (Weimar, 1806-7).

See: Haberle, Carl Constantin.

Charakterisirende Darstellung der gemein- nützigsten, so wie der am öftersten vorkommende Mineralien, mit Hinsicht auf Werner's und Haüy's Beobachtungen und die neuesten chemischen Untersuchungen entworfen, und zum Gebrauch für Schulen und Lehranstalten sowie auch zum Selbstunterrichte für Liebhaber der Naturgeschichte, die schon selbst kleine Mineraliensammlungen besitzen, bestimmt von C.C. Haberle. [With a preface by F.J. Bertuch]. (Weimar, 1806).

See: Haberle, Carl Constantin.



BERZELIUS

BERZELIUS, Jöns Jakob. (BORN: Väversunda, Östergötland, Sweden, 20 August 1779; DIED: Stockholm, Sweden, 7 August 1848) *Swedish chemist & mineralogist.*

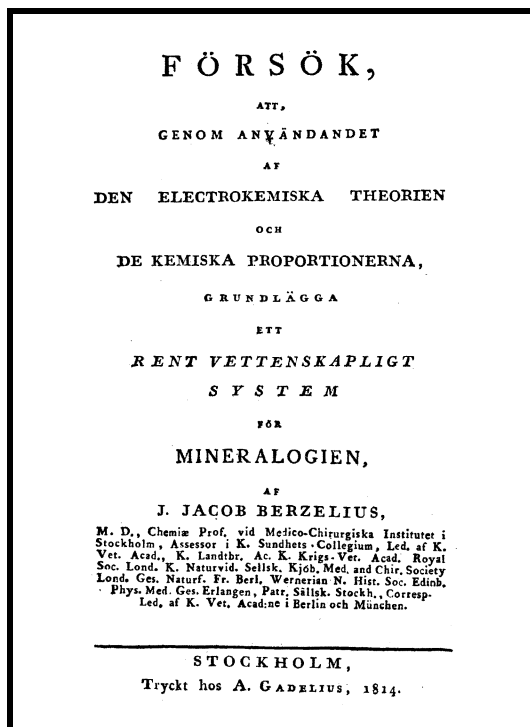
Berzelius studied medicine and chemistry at the University of Uppsala, from which he graduated 1804. In 1806, he was appointed professor of chemistry at the University of Stockholm. He became a prolific researcher and editor. In 1810, Berzelius was elected president of the Academy of Science. He was greatly distinguished by his skill and precision as a chemical analyst (probably the best of his generation), and he contributed much to advance the atomic theory first stated by Dalton by proposing a chemical nomenclature based upon it.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 22. • Beekman, *Systematische Mineralogie*, 1906: 101 & 107. • Berzelius, J.J., *Selbstbiographische Aufzeichnungen*. Herausgegeben von H. G. Söderbaum. Nach der wörtlichen Übersetzung von Emilie Wöhler bearbeitet von Georg W. A. Kahlbaum. Amedeo Avogadro und die

Molekulartheorie. Von Icilio Guareschi. Deutsch von Dr. Otto Merckens. Leipzig, 1903. 8°: xiv, 194 p. [Published as: *Monographien aus der Geschichte der Chemie*, Heft 7.; Berzelius' autobiography]. • Bugge, *Buch der grossen Chemiker*, 1929: 1, 428-49. • Callisen, *Medicinisches Schriftsteller-Lexicon*, 1830-45: 2, 199-212 & 26, 274-9. • *Catalogue of Portraits of Naturalists*: 178 [4 portraits listed]. • Cleavelly, *World Palæontological Collections*, 1983: 56. • Drugulin, *Sechstausend Portraits*, 1863: nos. 398-407 & 6054. • DSB: 2, 90-7 [by H.M. Leicester]. • *Encyclopaedia Britannica*, 11th edition. • Fischer, *Mineralogie in Sachsen*, 1939: 317-8. • Fruton, *Bio-Bibliography*, 1982: 61 [other refs.]. • *Great Chemists*: 385-402, portrait. • *ISIS*, 1913-65: 1, 142-4. • Jaffe, *Crucibles: The Great Chemists*, 1936: 136-156, portrait. • Jorbes, J.E., *Jacob Berzelius. His Life and Work*. Los Angeles and Berkely, University of California Press, 1970. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 436-7. • Melhado, E.M., *Jacob Berzelius. The emergence of his chemical system*. Madison, University of Wisconsin Press, 1981. [1]-357 p. • Partington, *History of Chemistry*, 1961-70: 4, 142-77, portrait. • Pogendorff: 1, cols. 172-5. • Sarjeant, *Geologists*, 1980: 2, 544-7, Suppl. 1 (1985), 1, 289-90 & Suppl. 2 (1996), 1, 437-8. • SBA: Scandinavian Biographical Archive: A-375, 317-378; B-024, 114-129. • Schaedler, *Biographisch Handwörterbuch*, 1891: 11. • *Svenskt Biografiskt Handlexikon*: 1, 85-6, portrait. • *Svenskt Biografiskt Lexikon*: 4, 46-60. • Szabadváry, *History of Analytical Chemistry*, 1966: 125-39, portrait. • Thomas, *Dictionary of Biography*, 1884: 346. • WBI. • *World Who's Who in Science*: 167.

Afhandlingar i Fysik, Kemi och Mineralogi. Utgifne af W. Hisinger och J. Berzelius. (Stockholm, 1806-18).

See: Afhandlingar I Fysik.



FÖRSÖK, ATT GENOM ANVÖNDANDET, 1814

Försök, att genom Användandet

534. — Swedish, 1814.

Försök, | att, genom Användandet | af | den
Electrokemiska Theorien | och | de Kemiska
Proportioerna, | grundlägga | ett | rent
vettenskapligt | System | för | Mineralogien, |
af | J. Jacob Berzelius, | [...7 lines of titles and
memberships...] | [rule] | Stockholm, | Tryckt hos A.
Gadelius, 1814.

8°: π^1 1-6⁸ 7³; 52 ℓ .; [2], [1]-103 (i.e., 102) p. Page
102 misprinted 103. PAGE SIZE: 210 x 125 mm. uncut.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-103
(i.e., 102), Text.

RARE. The central premise of Berzelius' chemical theory was the duality of chemical compounds, in which he rigidly classified compounds and their components as either electronegative or electropositive. In the *Försök*, Berzelius for the first time gives an outline of his theory as it applies to the problem of mineral classification. Because distinguishing the elements of all compounds as either electronegative or electronegative, and giving to every element a place in a series, and a place defined by the degree of these relations, it seemed to provide a rigorous and complete principle of arrangement. Accordingly in the *Försök*, Berzelius arranged minerals by their electropositive element, and the elements according to their electropositive rank, thus supposedly removing all that was arbitrary and vague in previous chemical classifications of minerals.

Minerals are nothing more than naturally occurring chemical combinations, and in applying his theoretical structure, Berzelius was in the eyes of many contemporaries, attempting to subjugate the science of mineralogy to a branch of chemistry. This caused rather strong arguments to rage in the scientific journals of the period as to the appropriateness of Berzelius' theory. This became especially evident when the discovery of isomorphism showed that bodies containing very different electropositive elements could not be distinguished from each other. It was therefore impractical to place them into different sections of the classification. Thus, this first system of Berzelius crumbled.

Berzelius would not concede defeat, and after confessing the flaw of his first system, he proceeded to realign his system to be based upon the electronegative element. This inversion of the system was an attempt to preserve the duality principle of arrangement. Thus, instead of arranging metallic minerals according to their metal under iron, copper, lead, etc., all carbonate minerals came into one category, while all oxides were classified together in another section. This was a great improvement over the previous effort, and eventually, the correctness of Berzelius' revised method was recognized, and improved upon. To this day, it is one of the cornerstones on which modern mineral classification rests.

German, 1815: A translation in German was published serially in Schweigger's *Journal für Chemie und Physik* as "Veruch, durch Anwendung der electrisch-chemischen Theorie und der chemischen Proportion-Lehre ein rein

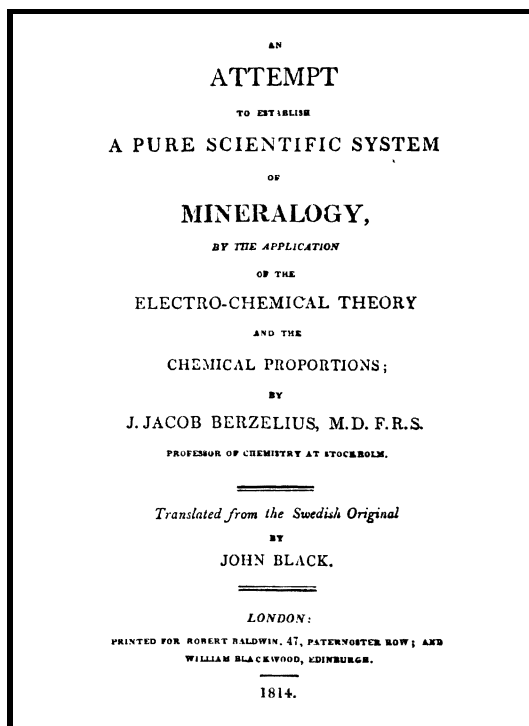
wissenschaftliches System der Mineralogie zu begründen" (see: 11 (1814), 193-233, 12 (1814), 17-62 & 15 (1815), 277-300). The first two installments were translated by A.F. Gehlen and the last by W. Pfaff. The third installment consisted of five appendices that were part of the Swedish original of 1814. Once the publication was completed a very rare Sonderabdruck was made in a small edition and it consists of the first two installments only. It bears the title:

Versuch | durch Anwendung | der | electrisch
chemischen | Theorie | und der | chemischen
Verhältnisslehre | ein | rein wissenschaftliches | System
der Mineralogie | zu begründen | von | J.J. Berzelius. |
Aus dem Schwedischen übersetzt | von | A.F. Gehlen. |
[rule] | (Einzelner Abdruck dieser im Journal für Chemie
und Physik | Bd. XI. u. XII. mitgetheilten Abhandlung.)
| [tapered rule] | Nürnberg, | bei Johann Leonhard Schrag.
| 1815. 8°: 1-4⁸ 5⁷ 6⁴; 44 leaves.; [2], [1]-86 p. Leave size:
208 x 116 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-86,
Text.

Adolf Ferdinand Gehlen. (BORN: Bütow, Pommern, Baltic??, 15 September 1775; DIED: Munich, Bavaria, Germany, 15 July 1815) *German chemist.* Son of an apothecary, Gehlen started out in pharmaceutical studies under Valentin Rose in Berlin. He graduated with a doctorate in chemistry from the University of Halle in 1806. In 1807 he was elected a member of the Academy of Science in Munich.

REFERENCES: (1814) *Freilich Sale Catalog*: no. 55. • Norman Catalog: no. 225. • Norman Sale Catalog: no. 934. • Partington, *History of Chemistry*, 1961-70: 4, 142-77. • Whewell, *History of the Inductive Sciences*, 1858: 2, 347-8. • BL: [8907.e.22.]. • BL: [8907.aa.22.]. (Gehlen) ADB. • DBA: I 374, 253-261; II 433, 35-37. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • NDB. • Poggendorff: 1, cols. 865-6. • WBI.



ATTEMPT, 1814

BERZELIUS

535. — English, 1814.

An | Attempt | to Establish | a Pure Scientific System | of | Mineralogy, by application of the Electro-chemical Theory | and the | Chemical Proportions, | By | J. Jacob Berzelius, M.D. F.R.S. | Professor of Chemistry at Stockholm. | [double rule] | Translated from the Swedish Original | by | John Black. | [double rule] | London: | Printed for Robert Baldwin, 47 Paternoster Row; and | William Blackwood, Edinburgh. | [rule] | 1814.

8°: A-I⁸; 72*l*.; [1]-144 p. (including 6 pages of advertisements at end). PAGE SIZE: 190 x 115 mm.

CONTENTS: [1]-2], Title page, verso C. Baldwin, Printer ...; [3]-4, "Advertisement."; [5]-108, Text.; [109]-118, "Appendix I."; 119-121, "Appendix II."; 122-124, "Appendix III."; 125-133, "Appendix IV."; [134]-138, "Appendix V."; [139]-144, "Scientific Books Printed for Robert Baldwin and for William Blackwood."

VERY SCARCE. Berzelius sent a copy of the Swedish edition to Thomas Thomson with the request that Thomson have it translated into English, correct the translation and have it published. This Thomson did, having engaged the services of one John Black to render the translation. Berzelius was dissatisfied with the quality of the translation remarking in the French edition of 1819 "The English translation... is made unfortunately by someone that has no notion of mineralogy probably, because she/it is full of mistakes; and in many of places original's sense is all to - fact disfigured. She/it appeared dependant preceded of one preface of the doctor Thomson, that assured to have him confronted to the original, and that she/it was perfectly faithful."

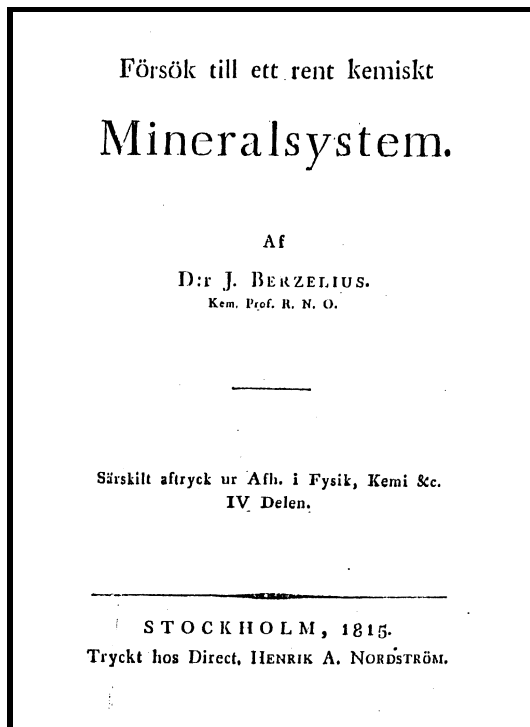
English translation by John Black from *Försök, att, genom användandet af den elektrokemiska Theorien* (Stockholm, 1814); the whole production supervised by Thomas Thompson, who also wrote the introduction. This is the first appearance in English of calculating the compositions of minerals on the basis of atomic theory, i.e. the law of multiple proportions and also of Berzelius' system of chemical symbols and formulae using the initial letters of the latinised names of the elements, and indicating the proportions of atoms present calculated according to the atomic weights, which has since been established as the standard form of chemical notation.

Owing to the lack of mineral knowledge on the part of the translator Berzelius' work was ill received in England. In fact a reviewer called the work "the most devoted sacrifice to experiment to hypothesis which the modern history of chemistry presents. Berzelius' theory is the measure of his facts, and like the Grecian robber who extended his victims upon his bed, and cut them shorter, if they were too long, or stretched them, if too short, this chemical Procrustes screws his results to the preconceived limits of an empirical axiom."

John Black. (BORN: ; DIED:) *English translator.*

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REFERENCES: BL: [987.i.33.]. • BMC: 1, 155. • Cole, *Chemical Literature*, 1988: no. 135. Ward & Carozzi (1984): no. 201. • *Journal of Science and the Arts*: 1 (1817), 226-41. • Roller & Goodman, *Catalogue*, 1976: 1, 112. (Black)



MINERALSYSTEM, 1815

Mineralsystem

536. — Swedish, 1815.

Försök till ett rent kemiskt | Mineralsystem. | Af | D:r J. Berzelius. | Kem. Prof. R.N.O. | [rule] | Särskilt aftryck ur Afh. i Fysik, Kemi &c. | IV Delen. | [tapered rule] | Stockholm, 1815. | Tryckt hos Direct. Henrik A. Nordström.

8°: π^1 A-I⁸ K²; 75*l*.; [2], [1]-148 p. PAGE SIZE: 190 x 115 mm.

CONTENTS: [2 pgs], Title page, verso blank. [1]-148, Text.

RARE. After the publication of the original *Försök* in 1814, the noted mineralogist J.F.L. HAUSMANN wrote a highly critical review of the work. This provoked Berzelius to publish the *Försök till ett rent kemiskt Mineralsystem* in 1815. With the addition of this supplementary monograph Berzelius' mineralogy no longer looked like an "attempt" but a fully developed mineralogy.

This is the separately printed expansion of Berzelius' mineral classification system, based upon the electropositive element. Whereas the *Försök* published in 1814 was a mere outline, the present title expands the theory to a full mineralogical classification. The work

was originally published in *Afhandlingar i Fysik, Kemi och Mineralogi* (see: 4 (1815), 1-148).

German, 1816: After its original appearance, Berzelius' chemical mineral system was soon thereafter translated into German by W. Pfaff and C. Gmelin and published as the article, "Versuch eines rein chemischen Mineralsystems" in *Schweigger's Journal* (see: 15 (1815), 301-63 & 419-51 & 22 (1818), 274-302). A last installment, containing the notes to the systematic arrangement of the minerals as they appeared in the original Swedish (pp. 117-148), was published in *Schweigger's Journal*, under the title, "Anmerkungen zu der Abhandlung: Versuch eines rein chemischen Mineralsystems." Aside from these notes, the monograph contains four parts: the first (pp. 301-23) offered direct responses to Hausmann's criticisms, the second (pp. 323-36) presented further articulations of the chemical and mineralogical concepts, the third (pp. 337-63) contained a critical discussion of previous mineral classifications, and the fourth (pp. 419-51) presented the full mineral system. The separate German edition of the mineralogy was issued as a very rare Sonderabdruck of the 1815 translations by Gmelin and Pfaff. It contained the notes which appeared in it before they were published in *Schweigger's Journal*. It bears the title:

Neues | System der Mineralogie | von | J.J. Berzelius. | Aus dem Schwedischen übersetzt | von | Dr. Chr. Gmelin und Prof. W. Pfaff. | [ornate rule] | [rule] | Einzelner Abdruck dieser im Journal für Chemie und Physik | Bd. XV. Mitgetheilten Abhandlung. | [tapered rule] | Nürnberg, 1816. | bei Johann Leonhard Schrag. p¹ 1-88 97 103; 76 leaves.; [2], [1]-148, [2] p. Leave size: 216 x 108 mm.

[2 pgs], Title page, verso blank.; [1]-148, Text.; [2 pgs], "Verbesserungen."

Rare. Pfaff provides a translation of Berzelius' electrochemical theory, while Gmelin gives a detailed examination of Berzelius' chemical mineral system.

Christian Gottlob Gmelin. (BORN: Tübingen, Germany, 12 October 1792; DIED:) *German physician.* Gmelin was a medical doctor, who had taken a long trip throughout France, England, Germany, Norway and Sweden, where he became a student of Berzelius. He was appointed in 1817 a professor of chemistry and pharmacy at the University of Tübingen.

Johann Wilhelm Andreas Pfaff. (BORN: Stuttgart, Germany, 5 December 1774; DIED: Erlangen, Germany, 26 June 1835) *German mathematician.* Pfaff was a professor of mathematics at the University of Dorpat (1803-9), then at the Real-Institute in Nuremberg (1809-17), then the University of Würzburg (1817-8) and finally at the University of Erlangen (1819-35).

REFERENCES: BL: [no copy listed]. • BL: [no copy listed]. (Gmelin) ADB. • DBA: I 398, 306-307; II 455, 217-219. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: I, col. 917. • WBI. (Pfaff) ADB. • DBA: I 949, 46-57; II 999, 194-195. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 2, cols. 428-9. • WBI.

537. French transl., 1819: Nouveau Système | de | Minéralogie, | par J.J. Berzelius, | Membre de l'Académie des Sciences de Stockholm. | Traduit du Suédois | sous les yeux de l'Auteur, et Publié par Lui-Même. | [ornament] | A Paris, | Chez Méquignon-Marvis, Libraire pour la partie de | Médecine, rue de l'École de Médecine, no 3, près celle de | la Harpe. | 1819.

8°; π⁵ 1-198 206; 162ℓ.; [4], [i]-vi, [1]-314, [2] p. PAGE SIZE: 95 x 120 mm.

CONTENTS: [2 pgs], Half title page, "Nouveau Système | De | Minéralogie," verso blank.; [2 pgs], Title page, verso blank.; [i], Dedication to Réné-Just Haüy.; [ii], Blank.; [iii]-vi, "Introduction."; [1]-106, "Développement | Du Nouveau | Système De Minéralogie."; [107]-149, "Réponse

NOUVEAU SYSTÈME DE MINÉRALOGIE,

PAR J. J. BERZELIUS,
MEMBRE DE L'ACADÉMIE DES SCIENCES DE STOCKHOLM.

TRADUIT DU SUÉDOIS
SOUS LES YEUX DE L'AUTEUR, ET PUBLIÉ PAR LUI-MÊME.



A PARIS,
Chez MÉQUIGNON-MARVIS, Libraire pour la partie de
Médecine, rue de l'École de Médecine, n° 3, près celle de
la Harpe.
1819.

NOUVEAU SYSTME DE MINÉRALOGIE, 1819

| A quelques objections contre les idées précé | dentes, accompagnée de quelques réflexions | sur la constitution chimique des minéraux."; [150]-181, "Essai | d'un examen raisonné des principaux sys- | tèmes de minéralogie."; [182]-229, "Arrangement Systematique | Des Minéraux."; 230-310, "Notes."; [311]-314, "Corrigenda."; [1 pg], "Table Des Matières."; [1 pg], Blank.

SCARCE. This translation was prepared by ANDRÉ JEAN MARIE BROCHANT DE VILLIERS from both the *Försök, att, genom användandet af den elektrokemiska Theorien* (Stockholm, 1814) and the *Försök till ett rent kemiskt Mineralsystem* (Stockholm, 1815). Brochant alters the text in minor ways, and adds new mineral analyses and many more notes than appeared in the 1815 monograph. It was prepared while Berzelius was visiting Berthollet at Arcueil in 1818-19, and incorporates new information Berzelius supplied to the translator. This was a tremendous improvement over the other translations, and it is the definitive statement of Berzelius' chemical mineralogical classification.

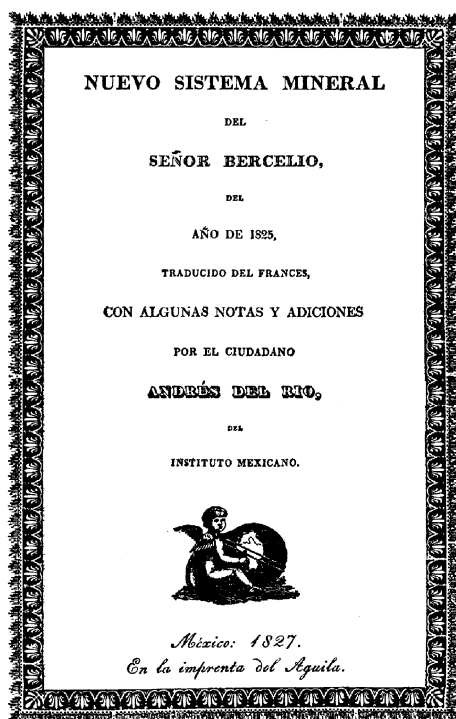
Another translation: A bad translation of Berzelius' theory that appeared in the *Journal de Physique* (see: 1 (1815), 86).

REFERENCES: BL: [726.g.23]. • BMC: 1, 155. • Dana's 7th (Bibliography): 66. • Hoover Collection: no. 122. • Roller & Goodman, *Catalogue*, 1976: 1, 112. • Ward & Carozzi, *Geology Emerging*, 1984: no. 202.

538. Spanish transl., 1827: [Contained within an ornate box:] Nuevo Sistema Mineral | Del | Señor Berzelio, | Del | Año De 1825, | Traducido Del Francés, | Con Algunas Notas Y Adiciones | Por El Ciudadano | Andrés Del Río, | Del | Instituto Mexicano. | [ornament] | México: 1827. | En la imprenta del Aguila.

2°; [2], [1]-28 p.

VERY RARE. This is a translation and implementation by Andrés del Río of Berzelius' chemical classification of minerals. It was based upon *Nouveau Système de*



NUEVO SISTEMA MINERAL, 1827

Minéralogie (Paris, 1819), and incorporates Del Río's own notes, modifications and additions.

REFERENCES: BL: [7106.d.6.]. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 3, 88-93 [no. 2113]. • NUC: 50, 663-8 [NB 0384285].

Work on Blowpipes

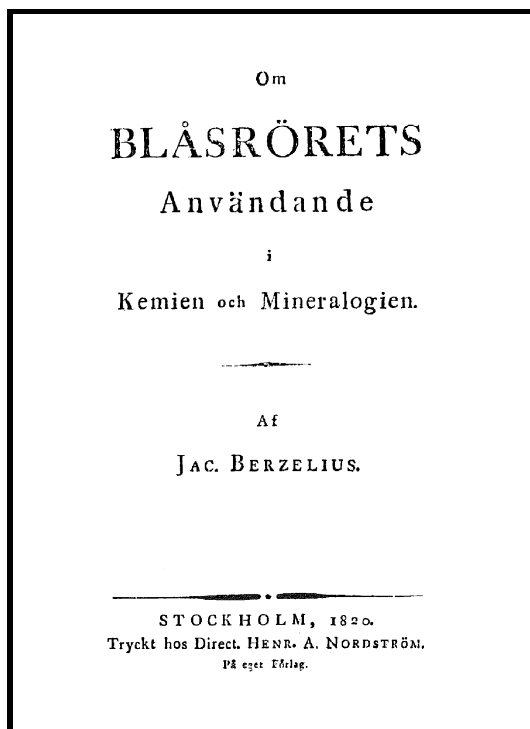
539. — Swedish, 1820.

Om | Blåsrörets | Användande | i | Kemien och Mineralogien. | [tapered rule] | Af | Jac. Berzelius. | [ornate rule] | Stockholm, 1820. | Tryckt hos Direct. Henr. A. Nordström. | På eget Förlag.

8°: π^5 A-T⁸; 157 ℓ .; [10], [1]-302, [2] p., 4 folding plates (showing 35 figures of blowpipes and apparatus). PAGE SIZE: 185 x 115 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Herrar Ledamöter af Bruks-Societeten.; [1 pg], Blank.; [4 pgs], Preface, not titled.; [2 pgs], "Innehåll."; [1]-296, Text.; 297-302, "Register."; [2 pgs], "Förklaring öfver Tabellerna." [Description of figures on plates]; [At end], 4 folding plates.

SCARCE. Berzelius was instructed in the use of the blowpipe by the greatest living practitioner of the period, Johann Gottlieb Gahn. Every summer between 1812 and 1816, Berzelius visited Gahn in Falun. Together they would visit the famous mineral localities of the area, and every new find was subjected to analysis back in Gahn's laboratory. There, Berzelius learned a great deal of the methodology of blowpipe technique. During a journey through England and France in 1819, he had occasion to instruct Parisian mineralogists such as Cordier, Bronigart, Brochant and Beudant in the use



OM BLÅSRÖRETS, 1820

of the blowpipe, and before Berzelius left Paris he had promised to write a manual on the use of this important tool.

On his return to Sweden, he kept his promise by authoring the classic book, *Om Blåsrörets Användande i Kemien och Mineralogien* (Employment of the Blowpipe in Chemistry and Mineralogy). In it, he summarizes all aspects of blowpipe analysis in clear and simple language. Berzelius describes seven different types of blowpipes in detail as well as a special oil lamp of his own design. He distinguishes four zones of the blowpipe flame, and was the first to use the terms "oxidation" and "reduction" in the modern definition. In 1809, Wollaston had successfully isolated platinum, and this enabled Berzelius to describe his use of the metal in making dishes, crucibles and spoons for use in his experiments before the powerful blowpipe flame. He introduces the use of hydrogen fluoride as a reagent, and describes the reactions and reductions of the newer elements.

Johan Gottlieb Gahn. (BORN: Ovanåker, Sweden, 19 August 1745; DIED: Falun, Sweden, 8 December 1818) *Swedish chemist*. Gahn was successively consultant (1768), mining master (1782) and assessor (1784) at the Swedish Berg Collegium. He was also involved in the banking industry at Stora Kopparberget. Elected a fellow of the Academy of Sciences in Stockholm in 1784.

REFERENCES: BL: [8906.aa.4.]. • Burchard, *History of Blowpipe Analysis*, 1984: 255-6. • Cole, *Chemical Literature*, 1988: no. 136. • *Freilich Sale Catalog*: no. 56. (Gahn) *Biographiskt Lexicon*. • Drugulin, *Sechstausend Portraits*, 1863: no. 1801. • DSB: 5, 222-3. • *ISIS*, 1913-65: 1,

448. • Poggendorff: 1, cols. 828-9. • SBA: Scandinavian Biographical Archive: B-087, 014-026. • *Svenskt Biografiskt Lexikon*: 16, 730. • WBI. • *World Who's Who in Science*: 624.

German editions

540. — German, 1821 [First edition].

Jac. Berzelius | von der | Anwendung des Löthrohrs | in der | Chemie und Mineralogie. | [rule] | Aus der Handschrift übersetzt | von Heinr. Rose. | [rule] | Mit IV. Kupfertafeln. | [rule] | Nürnberg, | bei Joh. Leonhard Schrag. | 1821.

8°: π^8 1-19⁸ 20⁴; 164 ℓ .; [i]-xvi, 311, [1] p. [page 256 misnumbered 456], 4 folding plates.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-x, "Vorrede."; xi-xvi, "Inhalt."; xv-xvi, "Erklärung der kupfertafeln."; [1]-301, Text.; 302-308, "Register."; 309-311, "In der Verlagshandlung ist ferner Erschienen."; [1 pg], "Druck-fehler."

SCARCE. The first German edition of *Om Blåsrörets* (Stockholm, 1820), in excellent translation by H. Rose from the author's manuscript. Rose had worked in Berzelius' laboratory, 1818-21, and was clearly familiar with the material documented in the book.

Heinrich Rose. (BORN: Berlin, Germany, 6 August 1795; DIED: 1864) *German chemist*. Rose earned his doctorate at the University of Kiel in 1821. Trained as an apothecary, he became a student of Berzelius from 1818-21, after which he was appointed a professor of chemistry at the University of Berlin. In 1833, he was elected a member of the Academy of Science in Berlin. Rose authored numerous chemical papers.

REFERENCES: BL: [no copy listed]. • BMC: 1, 155. • Bolton, *Bibliography of Chemistry*, 1893: 311. • Cole, *Chemical Literature*, 1988: no. 138. • Roller & Goodman, *Catalogue*, 1976: 1, 113. (Rose) AFB: II 562, 154. • ADB. • DBA: I 1054, 140-142; II 1094, 243-253. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 2, cols. 687-92 & 3, ?? . • WBI.

541. 2nd edition, 1828: Die | Anwendung des Löthrohrs | in der | Chemie und Mineralogie | von J. Jacob Berzelius. | [rule] | Zweite Auflage. | [tapered rule] | Nürnberg, | bei Joh. Leonhard Schrag. | 1828.

8°: π^8 χ^1 A-R⁸ S⁴ T¹; 149 ℓ .; [i]-xvi, [2], [1]-282 p., 4 folding plates (blowpipes). PAGE SIZE: 202 x 114 mm. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Vorrede," signed Jac. Berzelius, October 1827.; [vii]-xvi, "Inhalt."; [1 pg], Sectional title page, "Erste Abtheilung. | [tapered rule] | Beschreibung des Löthrohrs | und | Anweisung zu Löthrohrversuchen."; [1 pg], Blank.; [1]-115, Text.; [116], Blank.; [117], "Zweite Abtheilung. | [tapered rule] | Verhalten der Mineralien vor | dem Löthrohre."; [118], Blank.; [119]-266, Text.; 267-268, "Anhang."; 269-272, "Von dem Verhalten der Harnsteine vor dem | Löthrohre."; 273, "Berichtigungen."; [274], Blank.; [275]-280, "Register | zur zweiten Abtheilung."; 281-282, "Erklärung der Kupfertafeln."; [At end], 4 folding plates.

REFERENCES: BL: [no copy listed]. • BMC: 1, 155. • Roller & Goodman, *Catalogue*, 1976: 1, 113.

542. 3rd edition, 1837: Die Anwendung | des | Löthrohrs | in der | Chemie und Mineralogie | von | J. Jacob Berzelius. | [double rule] | Dritte Auflage | mit 4 Kupfertafeln. | [double rule] | Nürnberg, | bei Johann Leonhard Schrag. | 1837.

8°: [i]-xxiv, [1]-320 p., 4 folding plates. VERY SCARCE. REFERENCES: BL: [726.h.24.]. • Roller & Goodman, *Catalogue*, 1976: 1, 113.

543. 4th edition, 1844: Die Anwendung | des | Löthrohrs | in der | Chemie und Mineralogie | von | J. Jacob Berzelius. | [rule] | Vierte verbesserte Auflage. | Mit 4 Kupfertafeln. | [tapered rule] | Nürnberg, | Verlag von Johann Leonhard Schrag. | [short rule] | 1844.

8°: [i]-xxiii, [1], [1]-284, [4] p., 4 folding plates. VERY SCARCE.

CONTENTS: [i-ii], Half title page, "Die | Anwendung des Löthrohrs | in der | Chemie und Mineralogie," verso "Druck und Papier | von Friedrich Vieweg und Sohn ..."; [iii-iv], Title page, verso blank.; [v]-ix, "Vorrede."—signed Jac. Berzelius, July 1843.; [x], Blank.; [xi]-xxiii, "Inhalt."; [1 pg], Blank.; [1]-273, Text.; [274], Blank.; [275]-282, "Register."; [283]-284, "Erklärung der Kupfertafeln."; [4 pgs], Publisher's list.; [At end], 4 plates.

REFERENCES: BL: [1143.f.22.]. • BMC: 1, 155. • Roller & Goodman, *Catalogue*, 1976: 1, 113.

French editions

544. — French, 1821 [First edition].

De l'Emploi | du Chalameau | dans les Analyses Chimiques | et | les Déterminations Minéralogiques; | Par M. Berzelius. | Traduit du Suédois par F. Fresnel. | [ornament] | A Paris, | Chez Méquignon-Marvis, Libraire | pour la Partie de Médecine, | rue de l'Ecole de Médecine, No 3. | [rule] | 1821.

8°: π^6 1-25⁸; 205 ℓ .; [4], [i]-vi, [1]-396, [4] p., 4 folding plates. PAGE SIZE: 218 x 138 mm.

CONTENTS: [2 pgs], Half title page, "De l'Emploi | du Chalameau | dans les Analyses Chimiques | et | les Déterminations Minéralogiques," verso advertisement.; [2 pgs], Title page, verso blank.; [i]-vi, "Introduction."; [1]-386, Text.; [387]-394, "Index Minéralogique."; [395]-396, "Table Des Matières."; [2 pgs], "Errata."; [1 pg], Blank.; [1 pg], "Avis."

VERY SCARCE. Excellent first French translation by Fulgence Fresnel of *Om Blåsrörets Användande i Kemien och Mineralogien* (Stockholm, 1820).

Fulgence Fresnel. (BORN: Mathieu (Calvados), France, 1795; DIED: Bagdâd, Iraq, 1855) *French orientalist & historian*.

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REFERENCES: BL: [no copy listed]. • Cole, *Chemical Literature*, 1988: no. 137. • *Freilich Sale Catalog*: no. 392. • Hoover Collection: no. 123. • Roller & Goodman, *Catalogue*, 1976: 1, 113. (Fresnel) AFB: I 422, 349-350. • Thomas, *Dictionary of Biography*, 1884: p. 969. • WBI.

545. 2nd edition, 1837: De L'Emploi | Du Chalumeau | Dans Les Analyses Chimiques | Et | Les Déterminations Minéralogiques; | Par M. Berzélius. | Traduit Du Suédois par F. Fresnel. | [ornate rule] | Paris. | Méquignon-Marvis, Père Et Fils, | Libraires-Éditeurs, | Rue Du Jardinnet, No 13. | 1837.

8°: π^2 1-24⁸ 25⁶; 200 ℓ .; [4], [1]-396 p., 4 plates (folding; blowpipes and associated apparatus). PAGE SIZE: 210 x 126 mm.

CONTENTS: [2 pgs], Half title page, "De L'Emploi | Du Chalumeau | Dans Les Analyses Chimiques | et | Les Déterminations Minéralogiques," verso "Paris—Imprimerie De Terzuolo, | Rue de Vaugiard, No 11."; [2 pgs], Title page, verso blank.; [1]-386, Text.; [387]-394, "Index Minéralogique."; [395]-396, "Table Des Matières.";

VERY SCARCE. Scarce. A history of the blowpipe and instructions on its use occupy pages 1-98, while the remainder of the book describes testing for metals contained in individual specimens.

BERZELIUS

REFERENCES: BL: [no copy listed]. • Roller & Goodman, *Catalogue*, 1976: 1, 113.

546. 3rd edition, 1843: De L'Emploi | Du Chalumeau | Dans Les Analyses Chimiques | Et | Les Déterminations Minéralogiques. | Par M. Berzelius. | Traduit du Suédois par F. Fresnel. | [ornate rule] | Édité par Méquignon-Marvis père. | Paris, | Librairie Médicale De Médquignon-Marvis, | 3, Rue De L'École De Médecine. | [rule] | 1843. 8°: [4], [1]-396 p., 4 folding plates.

REFERENCES: BL: [no copy listed].

Italian edition

547. Italian transl., 1822: Analisi Chimica | d'ogni Specie di Minerali | da Eseguirsi Facilmente | colla | cannella dei Saldatori | Opera del Sig. M. Berzelius | tradotta | Prima dallo Svedese in Francese | dal Sig. Fresnel | ora dal Francese in Italiano | dal Prof. Gazzeri. | [rule] | Firenze | dalla Stamperia Piatti | 1822.

8°: π⁸ 2-16⁸ 17⁴ 18²; [i]-viii, [1]-258 p.

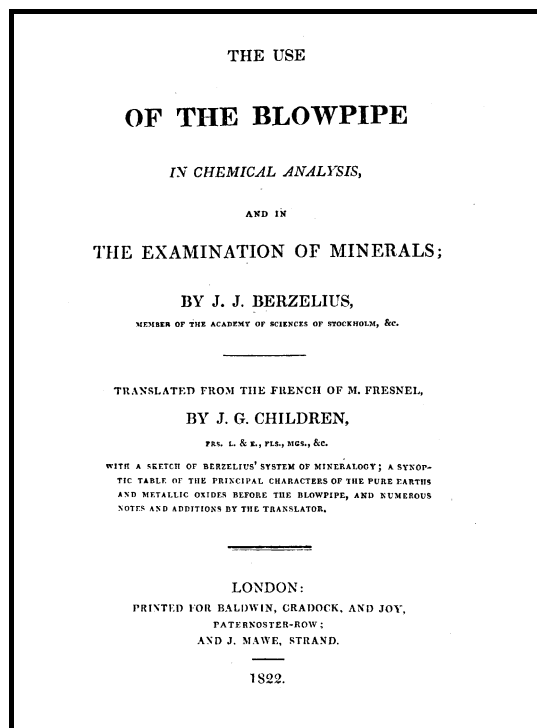
CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Nota del Traduttore Italiano."; [v]-viii, "Introduzione."; [1]-248, Text.; [249]-250, "Avvertimento del Traduttore Italiano."; [251]-256, "Indice Mineralogico."; 257-258, "Tavola dalle Materie."

RARE. Italian translation by Giuseppe Gazzeri of *De l'Emploi du Chalumeau dans les Analyses Chimiques* (Paris, 1821), which was reissued in 1823 in Napoli.

Giuseppe Gazzeri. (BORN: 1771; DIED: 1848) *Italian chemist.*

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BIOGRAPHY NEEDED
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REFERENCES: BL: [no copy listed]. (Gazzeri) ABI: I 463, 140-144; II 270, 298. • Codignola, *Pedagogisti ed educatori*: In: *Enciclopedia bio-bibliografica Italiana*, 1939. • Provenzal, *Bio-Bibliografici di Chimici Italiani*, 1938: pp. 99-104. • WBI.



USE OF THE BLOWPIPE, 1822

English editions

548. — English, 1822.

The Use | Of The Blowpipe | in Chemical Analysis, | and in | the Examination of Minerals; | By J.J. Berzelius, | Member of the Academy of Sciences of Stockholm, &c. | [rule] | Translated from the French of M. Fresnel, | by J.G. Children, | FRS. L. & E., FLS., MGS., &c. | with a sketch of Berzelius' System of Mineralogy; a Synop- | tic Table of the Principal Characters of the Pure Earths | and Metallic Oxides before the Blowpipe, and Numerous | Notes and Additions by the Translator. | [double rule] | London: | Printed for Baldwin, Cradock, and Joy, | Paternoster-row; | and J. Mawe, Strand. | [rule] | 1822.

8°: a-b⁸ c⁴ B-Y⁸ Z⁴; 192ℓ.; [i]-xxxix, [1], [1]-343, [1] p., 3 plates, one table. PAGE SIZE: 210 x 128 mm.

CONTENTS: [i-ii], Title page, verso "C. Baldwin, Printer."; [iii], "Dedication to Humphry Davy."; [iv], Blank.; [v]-x, "Translator's Preface"—signed J.G. Children, March 1822.; [xi]-xv, "Note to the Reader."; [xvi], Blank.; [xvii]-xxxiv, "Sketch of Berzelius's Mineralogical Arrangement, By the Translator."; [xxxv]-xxxix, "Introduction by the Author."; [xxxx], Blank.; [1]-133, Text.; 134-335, "Description of the Phenomena presented by Minerals when exposed to the action of the Blowpipe."; [336], Blank.; [337]-343, "Index."; [1 pg], "Errata."

VERY SCARCE. First English rendition by J.G. Children from *De l'Emploi du Chalumeau dans les Analyses Chimiques* (Paris, 1821). A table facing page 118 is titled, "Synoptic view of the principle characters of the earths and metallic oxides before the blowpipe."

John George Children. (BORN: Ferox Hall, Tunbridge, England, 18 May 1777; DIED: Halsteadplace, Kent, England, 1 January 1852) *English mineralogist & zoologist.* Children was educated at Eaton and Cambridge. He was employed as curator of the mineral collection of the British Museum from 1816 until 1840. Elected a Fellow in 1807, he was a longtime secretary of the Royal Society.

REFERENCES: BL: [1035.h.21]. • Roller & Goodman, *Catalogue*, 1976: 1, 113. (Children) *Annual Register*: 1852. • DNB. • Poggendorff: 1, cols. 435-6 & 1550.

549. American edition, 1845: The Use | of the | Blowpipe | in | Chemistry And Mineralogy. | By J.J. Berzelius. | [rule] | Translated | From The Fourth Enlarged And Corrected Edition, | by J.D. Whitney. | [rule] | Boston: | William D. Ticknor and Co. | M DCCC XLV.

8°: a⁶ b² 1-19⁶ 20⁴ 21¹; 128ℓ.; [i]-xv, [1]-237, [1] p., 4 folding plates. PAGE SIZE: 215 x 133 mm.

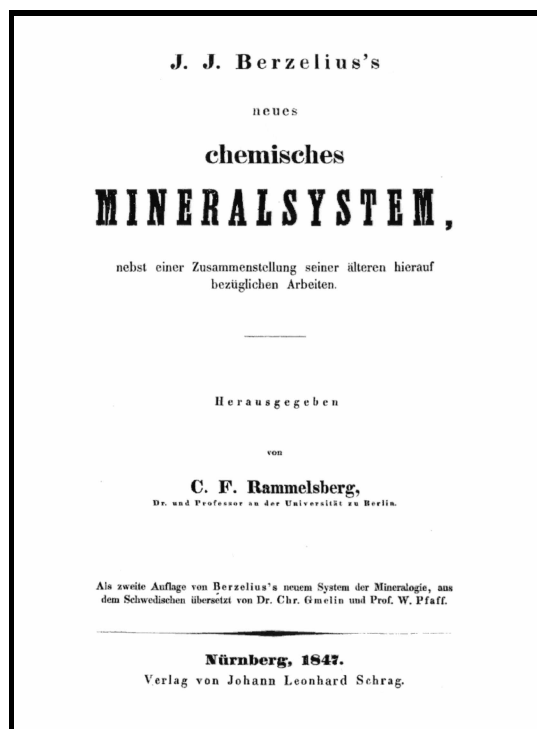
CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1845, "; [iii], Translator's preface.; [v]-ix, Introduction, signed J.J. Berzelius, July 1843.; [x], Blank.; [xi]-xv, "Contents."; [1 pg], Blank.; [1]-87, Text, part 1.; [88], Blank.; [89]-220, Text, part 2.; [221]-226, "Supplement."; [227]-230, "Behavior Of Urinary Calculi Before The | Blowpipe."; [231]-237, "Index To Part II."; [1 pg], Blank.; [At end], 4 folding plates.

SCARCE. Second English translation and the first published in America by Josiah Dwight Whitney from *Die Anwendung des Löthrohrs* (4th ed., Nürnberg, 1844). The enormous advances made in blowpiping as a means of determining the composition of minerals and ores by the celebrated Swedish chemist were deemed of such importance that this translation was prepared by Whitney to serve as an instructional work in the art within the

United States school system. Subjects treated include a history of blowpiping, apparatus, equipment, reagents, behavior of elements, and a main text treating specific tests. There is even a supplement for analysis of urinary calculi. The plates depict apparatus.

Josiah Dwight Whitney. (BORN: Massachusetts, 1819; DIED: 1896) *American geologist.* Whitney was state geologist for California from 1865 until 1882. In that capacity he made an extensive survey of the land with William H. Brewer, Clarence King, Lorenzo Yates and others. He authored a number of important books, including, *Metallic Wealth of the United States* (1854), *Mountain Heights in the United States* (1862), and *The Yosemite Book* (1868), a beautifully illustrated and rare book. In 1864, he measured the highest peak in the continental United States, which was later named a Mt. Whitney in his honor.

REFERENCES: BL: [1143.f.37.]. • BMC: 1, 156. • Cole, *Chemical Literature*, 1988: nos. 139 & 140. • Hoover Collection: no. 123. • Roller & Goodman, *Catalogue*, 1976: 1, 113. (Whitney) ABA: I 1733, 373-388; II 671, 29-30. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • Drake, *Dictionary of American Biography*, 1872. • Herringshaw's *National Library of American Biography*. • National *Cyclopedia of American Biography*. • WBI.



MINERALSYSTEM, 1847

550. — German, 1847.

J.J. Berzelius's | neues | chemisches | Mineralsystem, | nebst einer Zusammenstellung seiner älteren hierauf | bezüglichen Arbeiten. | [rule] Herausgegeben | von | C.F. Rammelsberg, | Dr. und Professor an der Universität zu Berlin. | als zweite Auflage von Berzelius's neuen System der

Mineralogie, aus | dem Schwedischen übersetzt von Dr. Chr. Gmelin und Prof. W. Pfaff. | [tapered rule] | Nürnberg, 1847. | Verlag von Johann Leonhard Schrag.

8°: [i]-vi, [2], [1]-262, [2] p.

CONTENTS: [4 pgs], Advertisements.; [i-ii], Title page, verso blank.; [iii]-vi, "Vorwort.": [1 pg], "Inhalt.": [1 pg], Blank.; [1]-262, Text.; [1 pg], "Gedruckt bei A.W. Schade in Berlin, Grünstr. 18.": [1 pg], Blank.; [4 pgs], Advertisements.

RARE. In 1847, towards the end of Berzelius' life, Gmelin, Pfaff and Rammelsberg, his former students and associates honored their colleague with the publication of this volume. It contains German translations of seven memoirs authored by Berzelius relating to the classification of minerals. Two of these memoirs refer to Berzelius' two classification schemes, the earliest based upon the electropositive element and the later which differentiated by the electronegative element. Other memoirs answer various critics of the classification scheme, while the last paper by Rammelsberg is a survey of the mineral kingdom upon the lines laid down by Berzelius.

REFERENCES: BL: [7104.bb.4.]. • BMC: 1, 155. • Dana's 7th (Bibliography): 79.



BESLER

BESLER, Basilus. (BORN: Nürnberg, Germany, 13 February 1561; DIED: Nürnberg, Germany, 13 March 1629) *German apothecary & botanist.*

From 1589 to 1629, Besler was an apothecary and from 1594 a leading citizen of Nuremberg. He founded a natural history cabinet and a botanical garden. He is considered the best botanist of his time. His principle work in the field and that on which his reputation rests is the highly illustrated work, *Hortus Eystettensis* (1st ed., Nürnberg, 1613). It consists of large folio volume containing 366 exquisite plates with descriptive letterpress that picture about 1,000 plant species in full bloom.

REFERENCES: ADB: 2, 555. • Böhner, K., "Die Literaten unter den Nürnberger Apothekern," *Apotheker Zeitung*, 47 (1932), 1491 f. • *Biographie Universelle*. •

Catalogue of Portraits of Naturalists: 178 [3 portraits listed].
 • DBA: I 94, 166-170. • DBE: 1, 491. • *Deutsche Apotheker Biographie*: 1, 48-50. • Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, col. 1047. • NDB: 2, 178 [by G. Löhlein]. • Nissen (ZBI): 1, 71-3 & 2, 15. • Pritzel, *Thesaurus Literaturæ Botanicæ*, 1871-3: p. 26. • Schmitz, R., K. Bartels, and H. Goßmann, "Nürnberg's Apotheker und Apotheken bis 1632," *Pharmazeutisches Zeitung*, 108 (1963), 1210. • Schneider, W., "Basilius Besler," *Pharmazeutische Industrie*, 16 (1954), 474 f. • WBI. • Will, *Nürnbergisches Gelehrten-Lexicon*, 1755-1808. • Zekert, *Deutsche Apotheker*, 1942: 74, portrait.



FASCICVLVS RARIORVM, 1616

551. — Latin, 1616 [First edition].

[Contained within an elaborate engraved frame showing Besler's cabinet:] Fascicvlvs | Rariorum et aspectu dig | norvm Varii Generis Qvæ | collegit ei svis impensis | æri ad Vivvm incidi | curavit atqve | evvlgavit | vit | Basilius Besler Noriberg: Pharmaceuticæ | chymicæ & Botanicæ cultor et | admirator | Me trasuit hæc, alias asía, et sua quemque vosuptas, | Sea tibi mitto tua, Zoile mitte micam. | Anno ChrIstI DoMInI SerVatorIs VerI.

Oblong 4°: 25ℓ., consisting of an engraved title page and 24 engraved plates. A dedication leaf may also accompany some copies. The date of publication is derived from the title page chronogram, "Anno ChrIstI DoMInI SerVatorIs VerI." The title page is engraved by Hans Troschel after Peter Isselburg's design. PAGE SIZE: 220 x 310 mm.

CONTENTS: Engraved title page, verso blank.; 24 plates.

RARE. A suite of engravings by P. Isselburg and H. Troschel [see notes below] illustrating the contents of Besler's 'Wunderkammer' located in Nürnberg. This was among the first such natural history collections in Germany, and like its Italian counterparts contained all manner of natural objects. The engraved title depicts Besler showing a visitor his cabinet, while a servant advances offering a saurian skull. There are drawers labeled Conchylia, Fructus, Lapides, shelves with chameleons, shells, an auk's egg, dried eels, while hanging from the wall and ceiling are a sawfish skull, bird of paradise, unicorn horns, various serpents, and a blowfish. Other shelves support a

row of books, apothecary jars, branches of coral, etc. There is no text to the work instead there are 24 engraved plates illustrating the contents of the cabinets. Every illustration is named and some have short accompanying descriptions in Latin and German. The plates are grouped into 6 of Marina, showing specimens of wonder from the sea, 2 of Conchylia, showing remarkable shells, 6 of Fructus depicting seeds and fruit, 4 of Animalia picturing chameleons, crocodiles, snakes, an armadillo, etc. and 6 of Lapides, including fossils, corals, and minerals. Only the engraved title is signed Petrus Isselburg, but he is probably responsible for the design of all the engravings.

Peter (Petrus) Isselburg (Eisselburg). (BORN: Cologne, Germany, c1568; DIED: Bamberg or Nürnberg, Germany, c1630) *German draughtsman, engraver & printer*. Isselburg is thought to have been a student of Crispijn van de Passe I or another Netherlandish artist. His work is known from 1606, when he was in Cologne, primarily producing frontispieces and prints for Cologne printers. By 1610 he was resident in Nuremberg. His work encompassed a broad spectrum of subjects, including portraits of scholars, generals and secular and clerical princes. His city panoramas are of historical interest and are distinguished by great technical proficiency. He also left a large number of sheets with emblems, costumes and scenes from history. In 1622 he left Nuremberg, subsequently moving to Bamberg in 1623, where he became a printer (1625), then to Coburg c1626 and back to Nuremberg in 1630. He was regarded as one of the most important German artists in his day.

Hans Troschel (Tröschel). (BORN: Nuremberg, Germany, 21 September 1585; DIED: Rome, Italy, 19 May 1628) *German draughtsman & engraver*. Troschel trained in Nuremberg with Peter Isselburg, for whom he later worked. Emperor Matthias's Entry into Nuremberg on 3 July 1612 was one of his first works. Signed and dated engravings and drawings increased after 1616. He worked partly from his own drawings and partly after drawings by other artists. Besides portraits and coats of arms he engraved views of Nuremberg, genre scenes and themes. His drawings consist mainly of studies of heads and figures. In 1624 Troschel moved to Rome, where his work was influenced by Francesco Villamena.

REFERENCES: BL: [462.b.15.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 257. • Murray, *Museums*, 1904: 1, 98-9. • Nissen (ZBI): no. 345 [incorrect collation]. • NUC: 51, 95 [NB 0388197-9]. • Pritzel, *Thesaurus Literaturæ Botanicæ*, 1871-3: no. 746. • Wilson, *History of Mineral Collecting*, 1994: 42, 160 & 204. (**Isselburg (Eisselburg)**) ADB. • DBA: I 591, 59-142; II 639, 251-256. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • NDB. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 19, 265-6. • WBI. (**Troschel (Tröschel)**) DBA: I 1286, 109, 110-112; II 1319, 253-255. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 33, 429-30. • WBI.

552. 2nd edition, 1622: [Contained within an elaborate engraved frame showing Besler's cabinet:] Continvatio. | Rariorum Et Aspectu Dig- | norvm Varii Generis Qvæ | Collegit Et Svis Impensis | Æri Ad Vivum Incidi | Curavit Atqve | Evvulgavit | vit. | Basilius Besler Noriberg: Pharmaceuticæ, | chymicæ & Botanicæ cultor et | admirator. | Me trasuit hæc, alias alia, et sua quemque vosuptas, | Sed tibi mitto tuam, Zoile mitte meam. | Anno ChrIstI DoMInI SerVatorIs VerI. | Se VerI.

Oblong 4°: 33 leaves, consisting of an engraved title page, one leaf of dedicatory text and 31 plates. The date of publication is derived from the title page chronogram, "Anno ChrIstI DoMInI SerVatorIs VerI Se VerI" (Cf. Nissen-Zoological: no. 345). The title page is engraved by Hans Troschel after Peter Isselburg's design, and was used

in the publication of the first edition in 1616.

RARE. Although stated to be a 'Continuatio' on the title page, this is a reissue of the original 24 plates of the first edition of 1616, together with a modified title leave, 7 new engraved plates, and an engraved dedication leave in Latin that might in some cases be found in the 1616 edition. Therefore, the text consists of 31 plates illustrating natural history specimens, which are labeled in Latin and German. Besides the original plates, an additional 6 show Lapidēs and one more Fructus. The title engraving is reused from the 1616 printing, with only the wording of the title changed.

REFERENCES: BL: [725.i.7.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 257. • Nissen (ZBI): no. 345. • NUC: 51, 95 [NB 0388196]. • Wellcome Catalog (Books): 1, no. 826.



RARIORA MUSEI BESLERIANI, 1716

553. — Latin, 1716.

[In red:] Rariora | [in black:] Mvsei Besleriani |
 quae olim | Basilivs | et | Michael Rvpertvs |
 [in red:] Besleri | [in black:] Collegerunt, | [in red:]
 Aeneisque Tabvlis Ad Vivvm | [in black:] Incisa
 Evvlgarvnt: | nunc commentariolo illustrata | a |
 [in red:] Johanne Henrico | [in black:] Lochnero, | [in
 red:] Vt Virtvti Toy Makaritoy | [in black:] Exstaret
 Monvmentvm, Denvo Lvci | Pvblicae Commisit
 Et Lavdationem Ejvs | Fvnebrem Adjecit |
 Maestissimus Parens | [in red:] Michael Fridericvs |
 [in black:] Lochnervs | Archiater Caes. Acade. Leo-
 pold. Carol. Nat. Cvr. Ephem. | Director. | [in red,
 double rule] | [in black:] Anno O.R. M DCC XVI.

2°:)(2)()()2)()()2 [a]-c² A-Z² Aa-Ee²; 68ℓ.; [24],
 1-112 p., frontispiece (portrait of Lochner), 40 plates
 (folding). Title page in red and black. Printer's devices,
 head and tail pieces scattered throughout the text.
 PAGE SIZE: 324 x 195 mm.

CONTENTS: [Frontispiece]; [2 pgs], Title page, verso
 blank.; [9 pgs], Preface.; [1 pg], Testimonial, signed
 "Lvca Schroeckivs" together with a letter to "Michaelem
 Fridericvm Lochnervm" signed "Jo. Henrici Lochner.";
 [1 pg], "Lavdatio Fvnebris, | Quam | In Splendidis
 Exequiis | Jvvenis Nobilissimi, | Joh. Henrici | Lochneri |
 De | Hvmmelstein, | ..."; [1 pg], Blank.; [8 pgs], "Prorector
 Academiae | Magnifice, | ..."; [2 pgs], "ODE | Fvnebris |
 In | Obitvm | Io. Henrici | Lochneri | ..."; 1-112, Text.;
 [At end], 40 plates (folding).

PLATES: The signed frontispiece is a portrait, while
 the other plates show fruits, birds, animals, shells, fossils,
 stones and minerals. These forty folding plates are bound
 into the book's spine at the center fold by the use of a strip
 of paper. None of them is signed, however.

The plates comprise: Frontispiece. Portrait of J.H.
 Lochner contained within an oval frame signed G.D.
 Heümann del. et sc. [Plates I-VI.] Fructvs [fruits]. Plate
 VII. No title [roots & berries]. Plates VIII-IX. No title
 [birds]. Plate X. No title [horns of various animals]. [Plate
 XI.] Animalia [armidillo & lizards]. [Plate XII.] Animalia
 [lizards & salemanders]. [Plate XIII.] Animalia [lizards
 & aligators]. [Plate XIV.] Animalia [snakes]. Plate XV.
 No title [hammerhead shark]. [Plate XVI.] Marina [fish,
 turtle & octopus]. [Plate XVII.] Marina [fish & shark].
 [Plate XVIII.] Marina [crabs]. [Plate XIX.] Conchilla
 [shells]. [Plate XX.] Conchilla [shells]. [Plate XXI.] No
 title [shells in fanciful displays]. [Plate XXII.] Marina
 [starfish]. [Plate XXIII.] Marina [sponges]. [Plate XXIV.]
 Marina [corals]. [Plate XXV.] Marina [corals]. Plate XXVI.
 No title [corals]. [Plate XXVII.] Lapidēs [fossil shells].
 [Plate XXVIII.] Lapidēs [fossils]. [Plate XXXIX.] Lapidēs
 [stones]. [Plate XXX.] Lapidēs [concretions]. [Plate XXXI.]
 Lapidēs [fossils]. [Plate XXXII.] Lapidēs [fossils]. [Plate
 XXXIII.] Lapidēs [fossil shells]. [Plate XXXIV.] Lapidēs
 [fossil shells]. [Plate XXXV.] Lapidēs [fossil plants].
 [Plate XXXVI.] Lapidēs [stones]. [Plate XXXVII.] Lapidēs
 [stones]. [Plate XXXVIII.] Lapidēs [fossil shark teeth].
 [Plate XXXIX.] Lapidēs [stones]. Plate XXXX. No title
 [mushrooms].

RARE. The last published description of Beslers'
 remarkable 'Wunderkammer' written by Michael
 Rupertus von Lochner, and after his death, published
 as a lasting tribute by his father, Johann Henrich
 [see notes below]. This beautifully illustrated work,
 describes various objects of natural history contained in
 the collection started by Basilius Besler and continued
 by his nephew, Michael Rupert Besler. A beautiful
 portrait of Johann Henrich Lochner is used as a
 frontispiece. The text then presents descriptions
 of the objects pictured on the accompanying plates.
 These illustrate fruits, roots & berries, birds, lizards,
 salemanders, aligators, snakes, sharkss, fish, turtle,
 octopus, crabs, shells, starfish, sponges, corals, fossil
 shells, stones, fossil plants and fossil shark teeth. The 24
 plates originally published in Michael Rupert Belser's
Gazophylacium Rerum Naturalium (1st ed., Nürnberg,
 1642) [see next entry] are republished in this work,
 together with 16 additional.

Michael Rupert Lochner. (BORN: Nürnberg, Germany,
 c1696; DIED: Nürnberg, Germany, 1715) *German author.*
 Son of the physician, Johann Heinrich Lochner von
 Hummelstein, Michael authored six works before his

BESLER

premature death at the age of 19, including an account of Besler's Museum.

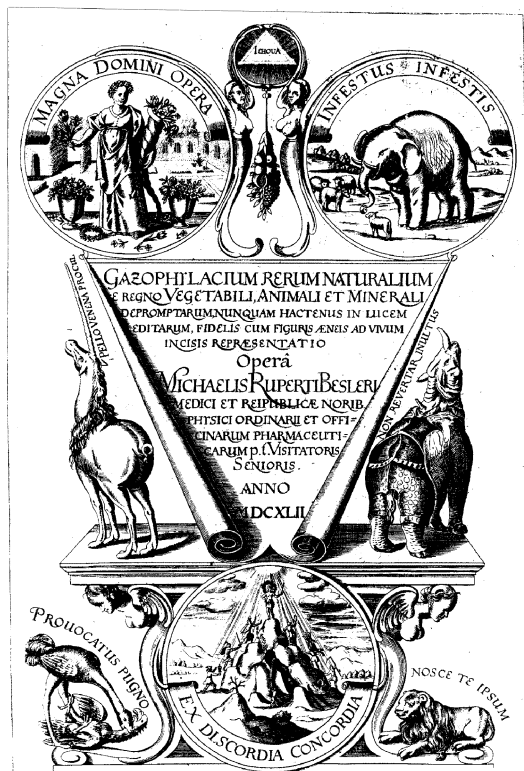
Johann Heinrich Lochner von Hummelstein. (BORN: Fürth, Germany, 8 February 1662; DIED: Nürnberg, Germany, 15 October 1720) *German physician.* He studied medicine at the Universities of Rostock, Kiel and Altersdorf, and then went on an extended trip to Paris, Leyden, Vienna and Padua to further extend his skills. Afterward he was appointed to a position in Altersdorf but moved on to Nürnberg where he opened a private medical practice. His knowledge of natural science lead to his appointment as director of the Akademie der Naturforscher (Academy of Naturalists) in Nürnberg.

REFERENCES: BL. • BMC: 3, 1162. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 5. • *Freilich Sale Catalog*: no. 362. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 260. • Nissen (ZBI): no. 348. • NUC. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 747. • Schröter's *Journal für die Liebhaber*: 5 (17??), 72. • Wilson, *History of Mineral Collecting*, 1994: p. 205. (Lochner) (Lochner von Hummelstein) Hirsch, *Biographisches Lexikon*, 1884-8: 4, 21 [by Seitz]. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, cols. 1484-5.

BESLER, Michael Rupertus. (BORN: Nuremberg, Germany, 1607; DIED: Nuremberg, Germany, 1661) *German physician & apothecary.*

The nephew of Basil Besler, Michael had a medical practice and apothecary shop in Nürnberg. He was a scholar and collector, who assembled important collections of art, antiques and natural history.

REFERENCES: ADB: 2, 555. • DBA: I 94, 184-187. • DBE: 1, 491. • Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, col. 1048. • Lambrecht & Quenstedt, *Catalogus*, 1938: 36. • WBI. • Will, *Nürnbergisches Gelehrten-Lexicon*, 1755-1808.



GAZOPHYLACIUM, 1642

554. — Latin, 1642 [First edition].

[Engraved title within a curious engraved design:]
Gazophylacium Rerum Naturalium | E Regno
Vegetabili, Animali Et Minerali | Depromptarum,
Nunquam Hactenus In Lucem | Editarum,
Fidelis Cum Figuris Aeneis Ad Vivum | Incisis
Repraesentatio | Operâ | Michaelis Ruperti Besleri
| Medici Et Reipublicae Norib. | Physici Ordinarii
Et Offi- | cinarum Pharmaceuti- | carum p.t.
Visitatoris | Senioris. | Anno | MDCXLII.

2°: Engraved title page and 34 unnumbered engraved plates of plants, animals and minerals with names and brief descriptions in Latin. The curious design of the title page is a border arrangement of animals and symbols. PAGE SIZE: 430 x 320 mm.

CONTENTS: Engraved title page, verso blank.; 34 plates.

VERY RARE. Basil Besler's [1561-1629; see entry above] *Wunderkammer* was inherited by his nephew Michael Rupert Besler, who added to the cabinet. The work published here catalogs his additions. It is a treasury of natural objects from the realms of the vegetable, animal and mineral. It contains standard items including a unicorn horn, a beak of a hornbill, a bird of paradise, a carved nautilus shell, an 'Arcimboldo' grotesques of shells, pyritized ammonites, asbestos, 'ruin' marble, engraved gems and antique coins. Rare plants and birds are illustrated along with ethnological items such as a Brazilian Indian girdle made from nuts of the Brazilian tree *Cerbera ahowai*. The image of this plate was used for the border of Valentini's *Museum Museroum* (Frankfurt, 1714). The very attractive engraved title shows emblematic medallions, with a rhinoceros, a unicorn, an ostrich, an elephant, a cornucopia and flowers with in a walled garden, and an alchemical symbol. These plates were reissued in 1716 and again in 1733, with added letterpress title in red and black and in German and Latin, and a short descriptive text in Latin and German. The first two issues were without text.

REFERENCES: BMC: 1, 156. • Cobres, *Deliciae Cobresianae*, 1782: 1, ??, no. 101 ["Diese Auflage is selten."]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 257. • Hunt Botanical Catalog: no. 238. • Murray, *Museums*, 1904: 1, 98-9. • NUC: 51, 95 [NB 0388211]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 747. • Schröter's *Journal für die Liebhaber*: 3 (17??), 20.

555. 2nd edition, 1716: [In black:] *Gazophylacium* | *Rerum* | [in red:] *Naturalium* | [in black:] *é* | [in red:] *Rregno Vegetabili, Animalî & Mine-* | [in black:] *rali depromptarum, nunquam hactenus* | *in Lucem editarum,* | *Cum Figuris Aeneis Ad Vivum Incisis,* | *Opera* | [in red:] *Michaelis Ruperti Besleri.* | [in black, vignette] | [ornate rule] | *Lipsiæ & Francofurti,* | [in red:] *Apud Joh. Herebordum Klosium, Bibliopol.* | [in black:] *Anno M. DCC. XVI.*

2°: [4], 35 (i.e., 34) plates. The curious design of the title page is a border arrangement of animals and symbols. PAGE SIZE: 386 x 264 mm.

CONTENTS: Comprising title page in red and black with engraved vignette, letterpress index leaf, and 34 engraved plates numbered (2-36, the title counting as plate one according to the index).

RARE. In this edition, the engraved title page of 1642 has been placed with one in black and red letterpress with an engraved vignette. Apart from the index leaf there was no further text, and the plates were printed from the original copper plates.

REFERENCES: BMC: 1, 156. • Cobres, *Deliciae Cobresianae*, 1782: 1, 102, n10. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 257. • Nissen (ZBI): 346. • NUC: 51, 95 [NB 0388213].

556. 3rd edition, 1733: [Engraved title within a curious engraved design:] *Gazophylacium Rerum Naturalium* | E Regno Vegetabili, Animali Et Minerali | Depromptarum, Nunquam Hactenus In Lucem Editarum, Fidelis Cum Figuris Aeneis Ad Vivum | Incisis Repraesentatio | Operâ | Michaelis Ruperti Besleri | Medici Et Reipublicae Norib. | Physici Ordinarii Et Offi- | cinarum Pharmaceuti- | carum p.t. Visitatoris | Senioris. | Anno | MDCCXXXIII. [PRINTED TITLE PAGE:]

[In black:] *Gazophylacium* | *Rerum* | [in red:] *Naturalium* | [in black:] E | Regno Vegetabili, Animali & Minerali de- | promatrum, | Cum figuris aeneis ad vivum incisis. | Oder Merckwürdige | [in red:] *Naturalien*=Kammer, | [in black:] Welche | Besondere Stücke, sowohl aus dem Gewächs= als | Their= und Mineralien=Reiche, unter schönen lebhaften | Kupffer=Stichen, vor Augen legt, | Mit Lateinischer und Teutscher Erklärung und Register | versehen. | [rule] | Leipzig; | [in red:] In der Zedlerischen Buchhandlung | [in black:] 1733.

2^o: π¹ B¹ C²; 4ℓ.; [8] p. Engraved title page, printed title page in red and black and 34 unnumbered engraved plates of plants, animals and minerals with names and brief descriptions in Latin. The curious design of the title page is a border arrangement of animals and symbols. PAGE SIZE: 430 x 320 mm.

CONTENTS: [Engraved title page]; [2 pgs], Printed title page, verso blank; [3 pgs], "Ordo Tabularum." [=description of plates in Latin followed by the same in German]; [2 pgs], "Index Alphabeticus." [=Index to depiction in Latin followed by German]; [1 pg], Blank; [At end], 34 plates.

RARE. The same plates together with added letterpress title in red and black and in German and Latin, and a short descriptive text in Latin and German.

REFERENCES: Cobres, *Deliciae Cobresianae*, 1782: 1, 102. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 260. • Hoover Collection: no. 124. • Nissen (ZBI): no. 347. • NUC: 51, 95 [NB 0388214].

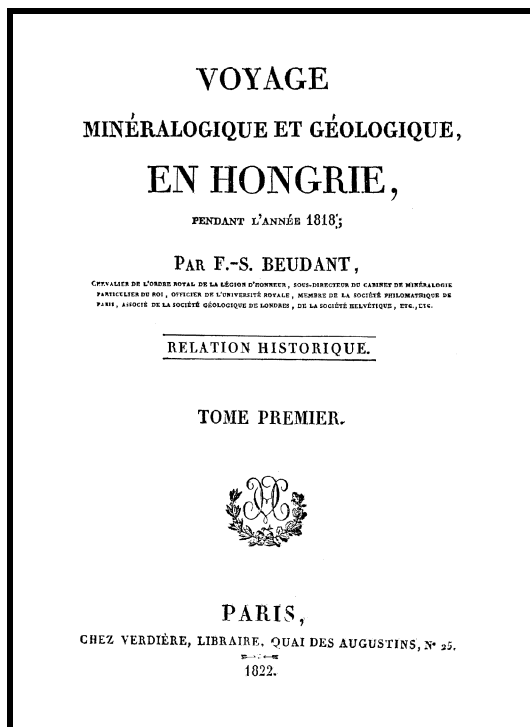


BEUDANT

BEUDANT, François Sulpice. (BORN: Paris, France, 5 September 1787; DIED: Paris, France, 10 December 1850) *French geologist & mineralogist.*

Beudant was educated at the École Polytechnic in Paris. He was named professor of mathematics at the Lycée d'Avignon in 1811, before being appointed professor of physics at the Lycée de Marseilles in 1813. Beudant learned his mineralogy in 1814 when he was sent by Louis XVIII to England to collect the recently purchased mineral collection of Bournon. When a government sponsored expedition was made to the Balkans in 1818, Beudant was in the group as mineralogist and geologist. In 1820, he was appointed Inspector-General of the University. Beudant was elected a member of the French Academy of Science in 1824.

REFERENCES: ABF: I 100, 159-164. • Birkás, G., "Egy francia tudós Debrecenban 1818 F.S. Beudant ban," *Debreceni Szemle*, 1931. 6 p. • Birkás, G., "La Hongrie vue par un savant français en 1818. Le voyage de F.S. Beudant," *Bibliothèque de la Revue des Études Hongroises*, 6 (1934), 32 p. • DSB: 2, 106 [by M.B. Kendall]. • *Encyclopaedia Britannica*, 11th edition. • Kettner, Radim., "François-Sulpice Beudant (1787, +1850)," *Casopis pro Mineralogii a Geologii*, 7 (1962), pt. 1, 100-1, portrait. • La Rocque, *History of Geology*, 1964: 1, 17 [by W.D. Nichols]. • Lacroix, A., *Notice historique sur François-Sulpice Beudant et Alfred-Louis-Olivier Legrand des Cloiseaux. Membres de la section de Minéralogie Paris, Académie des Sciences*, 1930. 101 p., 2 portraits. • Lacroix, *Figures des Savants*, 1932-8: 1, 195-239, plates 27-9. • Lambrecht & Quenstedt, *Catalogus*, 1938: 36. • Poggendorff: 1, cols. 179-80. • *Proceedings of the Geological Society, London*: 1851, xxv-xxvi. • *Quarterly Journal of Geological Society of London*: 7 (1851). • Sarjeant, *Geologists*, 1980: 2, 547-8, Suppl. 1 (1986), 1, 290 & Suppl. 2 (1995), 1, 438. • Thomas, *Dictionary of Biography*, 1884: 350. • WBI. • *World Who's Who in Science*: 169.



VOYAGE MINÉRALOGIQUE ET GÉOLOGIQUE, 1822

557. — French, 1822.

Voyage | Minéralogique Et Géologique, | En Hongrie, | pendant l'année 1818; | Par F.-S. Beudant, | [...3 lines of titles and memberships...] | [rule] Relation Historique. | [rule] Tome Premier. [-Quatrième.] | [ornament] Paris, | Chez Vredière, Libraire, Quai Des Augustins, N° 25. | [ornate rule] | 1822.

3 vols. and atlas. [VOL 1] 4°: [4], [i]-viii, [1]-560, [1]-42, [2] p. [VOL 2] 4°: [4], [1]-614 (i.e., 574, pages 569-574 misnumbered 609-614) p. [VOL 3] 4°: [4], [1]-659, [1] p. [Atlas] 4°: [4], [1]-4, [1]-16 p., 7 folding plates, 7 folding maps, one folding table. PAGE SIZE: Text, 260 x 200; Atlas, 285 x 215 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Voyage Minéralogique et Géologique, en Hongrie," verso "De L'Imprimerie d'Abel Lanoe."; [2 pgs], Title page, verso blank; [i-ii], Dedication to the King of France; [iii]-viii, "Préface."; [1]-550, Text.; [551]-560, "Table Analytique."—table of contents; [1]-42, "Table Alphabétique générale."; [2 pgs], "Fautes Essentielles à Corriger Avant la Lecture de l'Ouvrage."

[Vol 2] [2 pgs], Half title page, "Voyage Minéralogique et Géologique, en Hongrie," verso "De L'Imprimerie d'Abel Lanoe."; [2 pgs], Title page, verso blank; [1]-596, Text.; [597]-614 (i.e., 574), "Table Analytique des Chapitres et des principales observations contenues dans ce volume."

[Vol 3] [2 pgs], Half title page, "Voyage Minéralogique et Géologique, en Hongrie," verso "De L'Imprimerie d'Abel Lanoe."; [2 pgs], Title page, verso blank; [1]-644, Text.; [645]-659, "Table Analytique Des Chapitres et des Principales Observations Contenues dans le Résumé Géologique."; [1 pg], Blank.

[Atlas] [2 pgs], Half title page, "Voyage Minéralogique et Géologique, en Hongrie," verso "De L'Imprimerie d'Abel Lanoe."; [2 pgs], Title page, verso blank; [1]-4, "Analyse des Cartes et Planches."; [1]-16, Extract of report on the book while in manuscript by Humboldt, Lelièvre, and Brochant.; [At end], 7 folding plates, 7 folding maps, and one folding table.

PLATES: The atlas contains 16 folded leaves of tables, maps and engraved plates. The maps are signed 'N. I. Rousseau, Graveur de la Chambre des Députés' or 'N. I. Rousseau Sculpit.' The last 3 maps occur in two states, with and without legends. All are bound as foldouts at the end of the atlas. Within the atlas are contained: [Table] "Tableau Géologique de la Hongrie" (folding). [Map] "Carte des divisions intérieurs administratives, militaires, etc. des Provinces Hongraises." (hand-colored, folding). [Cross-sections] Small plate of cross sections. [Plate I] "Détails Relatifs aux Terrains Primitifs, Intermediaires &c." (hand-colored, folding). [Plate II] "Détails Relatifs au Terrain de Siénite et Grünstein Porphyrique et au Terrain de Trachyte." (hand-colored, folding). [Plate III] "Détails Relatifs au Terrain de Siénite et Grünstein Porphyrique et au Terrain de Trachyte." (hand-colored, folding). [Plate IV] "Détails Relatifs au Terrain de Trachyte." (hand-colored, folding). [Plate V] "Détails Relatifs au Terrain de Trachyte." (hand-colored, folding). [Plate VI] "Détails Relatifs au Terrain Secondaires et Tertiaires." (hand-colored, folding). [Plate VII] "Détails Relatifs à la Contrée de Balaton; Terrain Basaltique." (hand-colored, folding). [2 Maps] "Carte Géologique de la Contrée de Schemnitz." (folding, 2 states). [2 Maps] "Carte Géologique des bords du Lac Balaton." (hand-colored, folding, 2 states). [2 Maps] "Carte Géologique de la Hongrie et de la Transylvanie avec une partie des pays limitrophes." (folding, 2 states).

SCARCE. This summary of the mineralogy and

geology of Hungary, is based on observations made by Beudant while conducting an extensive French state sanctioned exploration through the Austro-Hungarian Empire. It is the earliest and most detailed geological survey of the Balkans, including not only what is now Hungary, but also parts of Yugoslavia, Austria, Romania, Czech Republic, Slovakia and Russia. Within the atlas are a very detailed geological map of Chemnitz and its surroundings (now in Hungary) and also other areas such as Transylvania being the southern part of this important mining region on the Balkan. These are among the earliest geological maps of any part of the European Continent. Maclure is critical of the work, saying: "This whole work is a specimen of book making. All that can possibly be useful, in mineralogy or geology, might, with much ease, have been put into 50 pages, and the reader saved the labor of turning over from 1500 to 1800 pages of repetitions and descriptions of the same rocks, a thousand times over, creating confusion and fatigue, without leaving in the mind any defined ideas on the subject" (AJS, 7 1824). Sinkankas draws attention to Beudant's description of opal mines in the Dubnik area and his discussion of the opal.

REFERENCES: (1822) Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 278. • *American Journal of Science*: 7 (1824), no. 2, 256-61 [review by W. Maclure]. • BMC: 1, 157. • Burke, *Origins of the Science of Crystals*, 1966: 116-20 & 87. • *Freilich Sale Catalog*: no. 59. • Herčko, Ivan and J. Jancsy, "Development of geological mapping in Slovakia" (pp. 129-37), in: E. Dudich, ed., *Contributions to the History of Geological Mapping*. Proceedings of the Xth INHIGEO Symposium 16-22 August 1982, Budapest, Hungary. Budapest, 1984. • NUC: 51, 487-9 [NB 0398256]. • Roller & Goodman, *Catalogue*, 1976: 1, 114. • Sinkankas, *Geology Bibliography*, 1993: no. 612. • Ward & Carozzi, *Geology Emerging*, 1984: no. 205.

558. English transl., 1823: Travels | In | Hungary, | In | 1818. | [double rule] | By F.S. Beudant, | Member Of Many Learned Societies. | [double rule] | Translated from the French. | [tapered rule] | London: | Printed For Sir Richard Phillips and Co. | Bride-Court, Bridge-Street. | [rule] | 1823.

4°: π¹ B-G⁴ H³; 64f.; [2], [1]-126 p. PAGE SIZE: 232 x 142 mm.

CONTENTS: [1 pg], Title page.; [1 pg], "Advertisement."; [1]-126, Text (page 126, "G. Sidney, Printer.").

RARE. Abridged translation of *Voyage Minéralogique et Géologique, en Hongrie* (4 vols., Paris, 1822).

REFERENCES: NUC: 51, 487-9 [NB 0398255]. • Roller & Goodman, *Catalogue*, 1976: 1, 114.

559. German transl., 1825: Mineralogische und geognostische Reise durch Ungarn im Jahre 1818 von F. S. Beudant ... Deutsch im Auszuge bearbeitet von C. Th. Kleinschrod. Mit 3 Karten. Leipzig, Bei Carl Cnobloch, 1825.

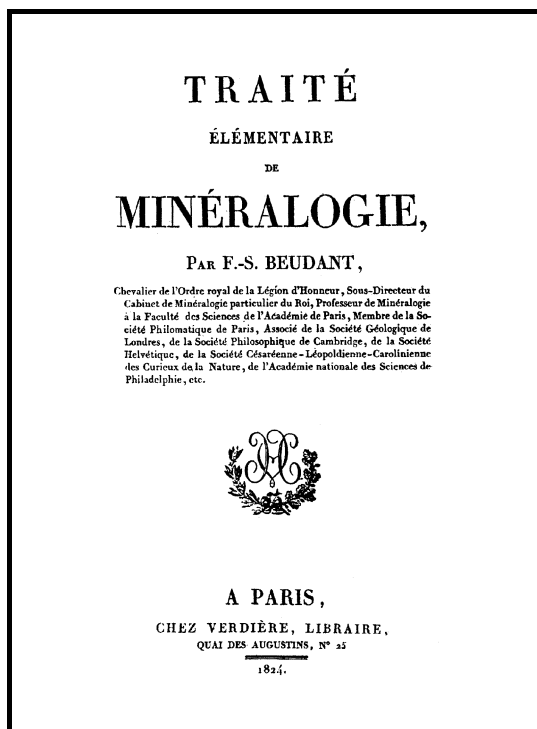
8°: [i]-vi, [1]-597 p., [3] folded leaves of plates (maps).

VERY SCARCE. Rare. Abridged translation of *Voyage Minéralogique et Géologique, en Hongrie* (4 vols., Paris, 1822), prepared by C.T. Kleinschrod.

Carl Theodor Kleinschrod. (BORN: 1789; DIED: 1869) *German mining expert.*

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[BIOGRAPHY NEEDED]
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REFERENCES: NUC: 51, 487-9 [NB 0398246]. • Roller & Goodman, *Catalogue*, 1976: 1, 114. (Kleinschrod) DBA: I 660, 5. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • WBI.



TRAITÉ ÉLÉMENTAIRE DE MINÉRALOGIE, 1824

560. — French, 1824 [First edition].

Traité | Élémentaire | De | Minéralogie, | Par F.-S. Beudant, | [...8 lines of titles and memberships...] | [ornament] | A Paris, | Chez Verdière, Libraire, | Quai Des Augustins, N° 25. | [double rule] | 1824.

8°: π^2 a³ 1-52⁸ 53-55⁴; 433^ℓ.; [4], [i]-vj, [1]-856 p., one large folding table ("Table méthodique des espèces Minérales, d'après les principes minéralisateurs"), 10 plates (numbered Pl. I-X; showing mostly crystal drawings, some signed in a fashion similar to 'Adelmann del. N.L. Rousseau sculp.'). PAGE SIZE: 206 x 124 mm.

CONTENTS: [2 pgs], Half title page, "Essai | D'un | Cours Élémentaire Et Général | Des | Sciences Physiques. | Minéralogie," verso "De L'Imprimerie D'Hippolyte Tilliard."; [2 pgs], Title page, verso blank.; [i]-vj, "Préface."; [1]-326, Text.; [327]-826, "Tableau Méthodique | Des | Espèces Minérales."; [827], "Table | Du Poids Des Atomes Des Corps Simples."; [828]-829, "Table | Du Poids Des Atomes, Des Oxydes Et Acides | Avec Leur Composition."; 830-832, "Table | Du Poids des atomes, et de la composition des composés qui se | présentent le plus souvent dans le règne minéral."; [833]-[834], "Nouveau Goniometre."; [835]-856, "Table | Des Matières."

SCARCE. A highly regarded textbook, considered at the time of its publication to be the best authority in French mineralogy, and used in centers of higher learning throughout France. At its appearance it was the best treatment of Berzelius chemical classification of minerals. In the first portion, Beudant provides a comprehensive introduction to mineralogical science, including definitions, crystallography, physical and

chemical properties, nomenclature, and an overview of his system of classification. The bulk of the volume is a descriptive mineralogy arranged according to this classification. Tables at the end provide an analysis of the specific weights of simple bodies and acids and a description of a new form of gonimeter.

Earlier mineralogical investigations, particularly experiments with carbonates and other salts, showed Beudant a relationship between chemistry and crystal form that he expressed as Beudant's law. In essence, he discovered that when two compounds were dissolved within the same solution and precipitated together, the properties of the resulting crystal were determined by both substances. For example, the interfacial angle would have a value intermediate between the angles of the original compounds and proportional to the amount of the compound within the crystal. Within the *Traité* Beudant expands upon the relationship between chemistry and crystal form by developing a system of classification based on a mineral's chemical makeup.

The system Beudant adopts was a device of his own research in which he follows Berzelius and utilizes the electronegative component of the mineral to arrange it within the system. He begins by writing how unscientific the current state of mineralogy is, and his wish to remove everything arbitrary in classifying minerals. After surveying the various properties of minerals, he defines mineralogy as the "la réunion des minéraux de même composition." To present the idea to the reader, he ranks the known elements into three groups: *Gazolyten* (make volatile compounds), *Leucolyten* (produce uncolored oxide compounds) and *Chrocolyten* (combine into colored compounds). Under each of these groups are now creates subgroups based upon the minerals' electronegative element, taking into account isomorphic substances. Thus, mineral groups such as carbonates are found together in the system. Beudant provides supporting evidence for the correctness of the system by showing the similarity in physical properties of minerals within with in these groups, thus anticipating Gmelin who a short time later showed the influence of the electronegative element on crystal form and physical properties. Beudant then continues to subdivide the system into various series by his own analogies.

Beudant strongly believed chemistry and the conditions during a minerals formation determined its crystallography. He writes that the diverse crystal forms of the same substance was not mere chance, but controlled by the chemical conditions of the environment when the crystal formed. He points out that the same crystal forms are seen at different localities where analogous geological conditions are found. Conversely, when neighboring minerals and rocks were different, a different crystal form would also occur.

In the use of chemical formulae, Beudant accepted Berzelius idea of using symbols to describe elements within formulae of the mineral species, however, in the *Traité* he modified the symbols to be based upon the

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French names of the elements rather than the Latin proposed by Berzelius. Thus he wrote E (*Étain*), M (*Mercur*), O (*Or*), Ox (*Oxigène*), etc. Berzelius took exception to this display of French pride, and pointed out that if each nation were to do the same modification, all advantage to the precise communication among chemists would be lost. In the second edition of the *Traité*, Beudant changed his symbols so as to conform with the Latinized names of Berzelius.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: pp. 119-21. • BMC: 1, 157. • *Boston Journal of the Philosophical Arts*: 3 (1825), no. 1, 71-81 [by J.W. White]. • Crosland, *Language of Chemistry*, 1962: p. 276. • Dana's 7th (Bibliography): 66. • Kobell, *Geschichte der Mineralogie*, 1864: pp. 318-21 & 343-5. • NUC: 51, 487-9 [NB 0398252]. • Roller & Goodman, *Catalogue*, 1976: 1, 114. • Schütt, H.-W., "Beudant, Berzelius und die mineralogische Spezies," *Gesnerus*, 41 (1984), 257-68. • Schütt, *Entdeckung des Isomorphismus*, 1984: 190-6.

561. 2nd edition, 1830-2: *Traité | Élémentaire | De Minéralogie.* | Par F.S. Beudant, | [...6 lines of titles and memberships...] | Deuxième Edition. | Tome Premier. [-Deuxième.] | [tapered rule] | Paris, | Chez Verdier, Libraire-Éditeur, | Quai Des Augustins, N° 25. | 1830. [-1832.]

2 vols. [VOL 1: 1830] 8°: π⁸ 1-46⁸ 47⁴ 48⁴; 384 leaves; [i]-xvi, [1]-752 p., 11 folding plates (Nos. 2,3,4,5 & 6 hand-colored). [VOL 2: 1832] 8°: π² 1-49⁸ 50⁷; 401^ℓ.; [4], [1]-797, [1] p., 13 folding plates, 5 folding tables, diagrams. PAGE SIZE: 205 x 123 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, "Traité | Élémentaire | De Minéralogie. | [rule] | I," verso "Du Mémè Auteur."; [iii-iv], Title page, verso blank; [v]-viii, "Préface."; [ix]-xvi, "Table Analytique."; [1]-10, "...Notions Préliminaires."; 11-357, "Livre Premier | Etude des Propriétés physiques des minéraux."; 358-476, "Livre Deuxième. | Etude des propriétés chimiques des substances | minérales."; 476-529, "Livre Troisième. | Distinction et Classification des substances | minérales."; 530-674, "Livre Quatrième. | Manière d'être des substances minérales dans la | nature, ou gisement."; 675-744, "Livre Cinquième. | Emploi des substances minérales."; 745-752, "Observations."; [At end], 11 plates (folding).

[Vol 2] [2 pgs], Half title page, "Traité | Élémentaire | De Minéralogie. | [rule] | I," verso "Du Mémè Auteur."; [2 pgs], Title page, verso blank; [1]-734, "Tableau Méthodique | des | Espèces Minérales."—text of descriptive mineralogy; [735]-759, "Tableau Systématique | des matières minérales."; [760], Errata; [761]-797, "Table | Des Matières."; [1 pg], Blank.; [At end], 5 plates (folding).

VERY SCARCE. Scarce. This much expanded and improved edition reflects the tremendous strides mineralogy and chemistry made during the first part of the nineteenth century. Adopted by the Royal Council of Public instruction for the teaching in the royal colleges, this was the leading textbook in mineralogical science in France for many years. Volume one gives crystallography, properties, chemistry, classification, occurrences, economic mineralogy. Volume two is a descriptive mineralogy. Large folding tables showing the overall classification of certain mineral groups are bound into the second volume.

REFERENCES: BMC: 1, 157. • Dana's 7th (Bibliography): 66. • *Freilich Sale Catalog*: no. 60. • NUC: 51, 487-9 [NB 0398252].

562. German transl., 1826: *Lehrbuch der Mineralogie*, von F.S. Beudant ... Deutsch bearbeitet von Karl Friedrich Alexander Hartmann. Mit 10 lithographirten tafeln. Leipzig, F.A. Brockhaus, 1826.

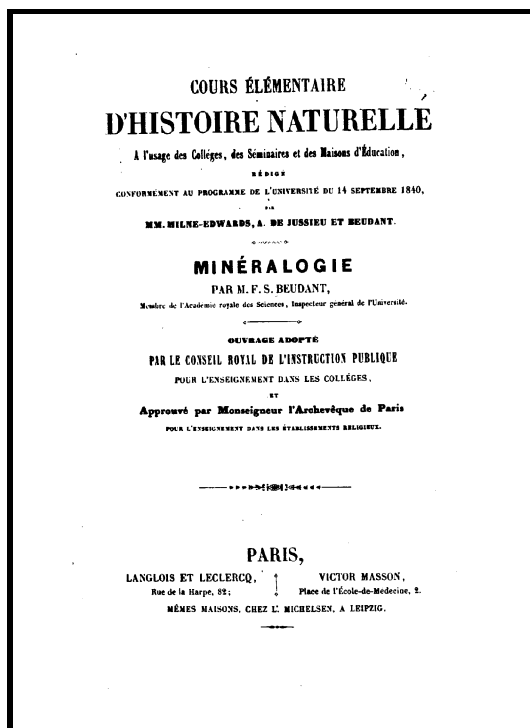
8°: [i]-li, [1]-851, [1] p., 10 plates (folding).

VERY SCARCE. Very scarce. Translation by Karl Friedrich Alexander Hartmann of *Traité Élémentaire de*

Mineralogie (Paris, 1824). "Literatur der Mineralogie," pp. [xxiii]-xxviii.

Carl Friedrich Alexander Hartmann. (BORN: Zorge near Walckenriedt, Harz, Germany, 8 January 1796; DIED: Leipzig, Germany, 3 August 1863) *German mineralogist, mining expert & metallurgist*. Hartmann was the son of a foundry official in the Oberharz, a prolific mining/mineral district in Germany. From these roots, he developed an early interest in mining and metallurgy, and through family connections secured a position as a student at the mining school in Clausthal, Austria. Although his studies were interrupted from 1813 to 1816 by a stretch in the German army fighting Napoleon, he resumed his education afterward, becoming an assistant to CHRISTIAN SAMUEL WEISS at the University of Berlin. In 1821, while still a student, Hartmann entered into a marriage that he could not financially support; therefore, he was obligated to leave the University and accept a bookkeeping position in Brunswick to provide for his family. His discretion and conscientiousness often meant being entrusted with important assignments. However, all spare time away from work or family was devoted to private study in the areas of geology, mining and mineralogy. His publications and translations in these fields brought him recognition and opportunities to travel throughout Europe. They also brought an appointment as commissioner of mines for Brunswick in 1825. Hartmann held membership in many scientific and technical societies, including Societät für die Gesamte Mineralogie of Jena and the Society for Mineralogy in St. Petersburg.

REFERENCES: NUC: 51, 487-9 [NB 0398227]. (Hartmann) DBA: I 479, 165-167; II 528, 201-202. • *Der Bergeist*: 8 (1863), no. 103, 427-8. • DSB: 6, 142-3 [by M. Koch]. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Poggendorff: 1, col. 1025 & 3, ?? . • Schenkenberg, *Die lebenden Mineralogen*, 1842: 44. • WBI.



COURS ÉLÉMENTAIRE, 1840

Cours Élémentaire d'Histoire Naturelle

563. — French, 1840 [First edition].

Cours Élémentaire | D'Histoire Naturelle | a l'usage des collèges et des maisons d'éducation, | rédigé | conformément au Programme de l'Université du 14 septembre 1840; | par | mm. F.S. Beudant, Milne-Edwards, et A De Jussieu. | [ornate rule] | Minéralogie | Par M. F.-S. Beudant, | [...one line of titles...] | [ornate rule] | Ouvrage Adopté | Par Le Conseil Royal De L'Instruction Publique | Pour L'Enseignement Dans Les Collèges, | Et | Approuvé par Monseigneur l'Archevêque de Paris | Pour l'Enseignement Dans Les Établissements Belles Lettres. | [ornate rule] | Paris. | Langlois Et Leclercq, | Rue de La Harpe, 32. | [Vertical rule between publishers] | Victor Masson, | Place de l'École de Médecine, 2. | Mêmes Maisons, Chez L. Michelsen, A Leipzig. | [ornate rule].

12°: π^5 1-246 254; 153ℓ.; [i]-ix, [1], [1]-295, [1] p., illus. PAGE SIZE: 180 x 130 mm.

CONTENTS: [i-ii], Half title page, verso advertisement.; [iii-iv], Title page, verso blank.; v-vi, "Programme pour l'enseignement de l'histoire naturelle dans les collèges."; vii-ix, "Table analytique de matières par ordre de leçons."; [1 pg], Errata.; [1]-65, "Premier leçon. Différence entre les corps organisés et les corps bruts. Définition des minéraux. Objet de la minéralogie et de la géologie. Distinction des formes régulières et des formes accidentelles."; 66-91, "Deuxième leçon. Propriétés optiques des minéraux."; 92-120, "Troisième leçon. Composition chimique des minéraux."; 121-127, "Quatrième et cinquième leçon. Classification des minéraux."; 128-147, "Tableau des espèces minérales."; 148-288, "Description des minéraux les plus utiles à connaître."; 289-295, "Table alphabétique."; [1 pg], Blank.

VERY SCARCE. This heavily illustrated mineralogy text, a standard work and very popular in its day, was apparently first printed in 1840. It was subsequently reissued in France with new title pages proclaiming new editions for the next 46 years, and it had translations into Italian, German, and Polish. Apparently, only the first issues of the mineralogy were printed as separate volumes, usually without years. There after, the mineralogical text was combined with Beudant's *Géologie* (1st ed., Paris, 1840-1), creating a richly illustrated volume of mineralogy and geology, which changed little in its content during its long history of publication.

The introductory part of the volume is sectioned into five areas: (1) differences between organic and mineral bodies, providing definition and purpose of mineralogy and geology, (2) optical and physical properties of minerals, (3) chemical composition of minerals, and (4-5) the classification of minerals. A table of mineral species and a descriptive mineralogy follow. The book concludes with an index. Within the volume main topics include a survey of crystals and crystallography, odd crystallizations,

ideas on the internal crystalline structure, optical and physical properties, the chemical composition of minerals, mineral classification, and general observations. Illustrations show the goniometers of Wollaston and Babinet, a multitude of various crystal forms and combinations, double refraction, and minerals specimens.

The geological volume that is usually found bound with the mineralogy describes current phenomena (i.e., earthquakes, volcanic phenomena, outside agent influence), the application to the old phenomena (central heat - deposits attributable to sediments - to uprisings - volcanic action - erosion of waters), composition of the terrestrial crust, the phenomenon of crystallization, a survey of the geological composition of France, discussion on the geologic age of disasters, and the geological state of Europe.

REFERENCES: NUC: 51, 487-9 [NB 0398204].

564. Combined edition, 1840: Cours Élémentaire | D'Histoire Naturelle | a l'usage des collèges et des maisons d'éducation, | rédigé | conformément au Programme de l'Université du 14 septembre 1840; | par | mm. F.S. Beudant, Milne-Edwards, et A De Jussieu. | [ornate rule] | Adopté par le Conseil royal d'Instruction publique | pour l'enseignement dans les Collèges. | [ornate rule] | Minéralogie. — Géologie. | [rule] | Par M. F.-S. Beudant, | de l'Académie royale des Sciences, Inspecteur général des Études, etc. | [rule] | Minéralogie. | [rule] | Paris. | Langlois Et Leclercq, | Rue de La Harpe, 81. | [Vertical rule between publishers] | Fortin, Masson et Cie, | Place de l'École de Médecine, 1. 12°: [i]ix, [1], [1]-295, [1] p., illus. This volume combines the mineralogy and geology volumes into a single binding.

REFERENCES: NUC: 51, 487-9 [NB 0398204].

565. 1841: Cours Élémentaire d'Histoire Naturelle. Minéralogie. — Géologie. Par M.F.S. Beudant ... Minéralogie. Paris, Langlois et Leclercq, Fortin Masson, 1841.

12°: 295, 248 p. : ill. VERY SCARCE.

REFERENCES: BMC: 1, 158 [wanting]. • NUC: 51, 487-9 [NB 0398232 & 0398243].

566. c1850: Cours Élémentaire d'Histoire Naturelle ... Minéralogie — Géologie. Paris, Langlois et Leclercq, n.d. (c1850).

2 vols. in one. 12°: x, 288 p., 379 illus.; x, 331 p., 374 illus. VERY SCARCE.

567. 5th edition, 1851: Cours élémentaire d'Histoire Naturelle à l'usage des Lycées, Collèges, etc.: la Minéralogie et la Géologie. Paris, Langlois et Leclercq, 1851.

2 vols. in one. 12°: xii, 295, [1] p.; xii, 350 p., over 600 woodcut text illus. VERY SCARCE.

568. 5th edition, reissue, 1852: Cours Élémentaire D'Histoire Naturelle Par Edwards, Jussieu Et Beudant. Zoologie Par Edwards. Paris, Masson, Langlois, 1852.

569. 6th edition, 1854: Cours Élémentaire D'Histoire Naturelle à L'Usage Des Lycées, Collèges, Séminaires Et Maisons d'Éducation. Minéralogie Et Géologie. Sixième Edition. Paris, Langlois et Leclerc et Masson, 1854.

2 vols. in one. 12°: x, 295 p.; xii, 348 p., illus. VERY SCARCE.

570. 7th edition, 1857: Cours Élémentaire d'Histoire Naturelle à L'Usage Des Lycées, Collèges, Séminaires Et Maisons D'Éducation. Minéralogie Et Géologie. Quinzième Edition. Paris, Langlois et Leclerc et Masson, 1857.

12°: [i]-x, [1]-295 p., illus. VERY SCARCE.

CONTENTS: [i-ii], Half title page, "Cours Élémentaire | D'Histoire Naturelle," verso series title page.; [iii-iv], Title page, verso blank.; [v]-x, "Table Analytique."; [1]-295, Text.; [1 pg], Blank.

REFERENCES: NUC: 51, 487-9 [NB 0398205 & 0398234].

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571. 8th edition, 1858: Cours Élémentaire d'Histoire Naturelle ... Paris, Langlois et Leclerc et Masson, 1857.

2 vols. in one. 12°: x, 295, [1] p. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398235].

572. 9th edition, 1861: Cours Élémentaire d'Histoire Naturelle ... Paris, Garnier Frères, 1861.

12°: x, 295, [1] p., illus. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398236].

573. 11th edition, 1865: Cours Élémentaire d'Histoire Naturelle. ... Mineralogie. Onzième Édition. [with] Géologie ... Onzième Édition. Paris, Garnier Frères et Victor Masson, 1865.

2 vols. in one. 12°: x, 295 p.; xii, 348 p., illus. PAGE SIZE: 180 x 120 mm. VERY SCARCE.
REFERENCES: BMC: 1, 158 [wanting].

574. 12th edition, 1869: Cours Élémentaire d'Histoire Naturelle ... Paris, Garnier Frères, 1869.

12°: vi, [v]-x, [1]-295, [1] p., illus. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398237].

575. 13th edition, 1872: Cours Élémentaire d'Histoire Naturelle ... Paris, V. Masson, 1872.

12°: x, 295, [1] p., illus. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398238].

576. 14th edition, 1874: Cours Élémentaire d'Histoire Naturelle ... Paris, Masson et Garnier, 1874.

2 vols. bound in one. 12°: 643 p. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398239].

577. 15th edition, 1877: Cours Élémentaire d'Histoire Naturelle ... Quinzième édition ... Paris, Garnier Frères, 1877.

2 vols. in one. 12°: x, 295 p.; xii, 348 p., illus. VERY SCARCE.

REFERENCES: BMC: 1, 158. • NUC: 51, 487-9 [NB 0398240].

578. 16th edition, 1882: Cours Élémentaire d'Histoire Naturelle ... Paris, Garnier Frères, 1882.

12°: x, 295 p., illus. VERY SCARCE.
REFERENCES: NUC: 51, 487-9 [NB 0398241].

579. 17th edition, 1886: Cours Élémentaire d'Histoire Naturelle ... Paris, Garnier Frères, 1886.

12°: x, 295 p., illus. VERY SCARCE.
REFERENCES: BMC: 1, 158. • NUC: 51, 487-9 [NB 0398244].

German editions

580. German transl., 1844: Die | Mineralogie | und | Geologie. | Von | F.S. Beudant, | Mitglied der königl. Akademie der Wissenschaften u.s.w. | [rule] | Vollständig in vier Bänden. | [rule] | Erster Band: | Mineralogie. I Theil. | [rule] | Aus dem Französischen | von | Ludwig Carl. | [ornate rule] | Stuttgart: | Scheible, Kieger & Sattler. | 1844.

4 vols. in one. Small 8°: 196, 204, 254, 251 p., 8 plates (folding), 4 tables (folding) and many text woodcuts. Vols. 1-2 contain the mineralogy and vols. 3-4 the geology. VERY SCARCE.

REFERENCES: NUC: 51, 487-9 [NB 0398248].

581. German transl., 1845: Populäre | Naturgeschichte | der drei Reiche. | Von | F.S. Beudant, Milne-Edwards, A.v. Jussieu. | [rule] | Vollständig in Einem Bande | mit mehr tausend getreuen Abbildungen. | [rule] | Aus dem Französischen übersetzt, | und herausgegeben von der Gesellschaft zur Verbreitung guter und wohlfeiler Bücher. | [double rule] | Durch den Königl. Rath für den öffentlichen Unterricht in Frankreich eingeführt. | [double rule] | Stuttgart: | Verlag von Scheible, Kieger & Sattler. | 1845.

4°: [1]-742 p., 6 leaves, containing over 1000 illus.

VERY SCARCE. Edited and published under the auspices of the Gesellschaft zur Verbreitung guter und wohlfeiler Bücher, this appears to be a combination of Beudant's mineralogy and geology, together with works on animals and plants by H. Milne-Edwards and A. de Jussieu.

The work by Beudant was translated by Ludwig Carl, while the others were from G. Kifling.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 114.

582. German transl., 1848: Die Mineralogie und Geologie. Aus dem Französischen neu übersetzt von J. G. Kurr. 2. Aufl. Stuttgart, Scheible, Rieger & Sattler 1848.

8°: 720 p., 378 illus. Translation by J.G. Kurr, and published as *Populäre Naturgeschichte der drei Reiche*, vol. 2. VERY SCARCE.

Italian edition

583. Italian transl., 1846-7: Mineralogia - Geologia del Signor F.S. Beudant ... Ed. Italiana per cura del Dottore Giustino Arpesani ... Milano, F. Vallardi, 1846-7.

2 vols. in one. "Ad uso dei collegi e degli istituti di educazione, redatto conforme al Programma dell'Università del 14 settembre 1840 dai signori F.S. Beudant, Milne Edwards e A. de Jussieu."

VERY SCARCE. Rare. Translation by the Italian physician and naturalist Giustino Arpesani from an early edition of Beudant's *Minéralogie*.

Giustino Arpesani. (BORN: 1817; DIED:) *Italian physician & naturalist.*

[BIOGRAPHY NEEDED]

REFERENCES: NUC: 51, 487-9 [NB 0398231]. (Arpesani) ABI: I 74, 238. • De Gubernatis, *Dizionario Biografico*, 1879. • WBI.

Polish edition

584. Polish transl., 1848: Wykład początków mineralogii i geologii przeł. i pomn. przez Hieronima. Warszawa, S. Strąbski, 1848.

2 vols. in one. 16°: xxvi, 297, 16 p.; xii, 352 p. Volume one contains the mineralogy, volume two the geology. RARE.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 216. • Internet search.

BEUTH, Franz. *German theologian.*

Beuth left the Jesuits becoming "Jülich" or a miner missionary at Düsseldorf.

REFERENCES: DBA: I 96, 277. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • LKG: 280. • WBI.

585. — Latin, 1776 [Collection catalog].

Juliae | et | Montium | Subterranea | Sive, | Fossilium variorum par utrumque | Ducatum hinc inde repertorum | Syntagma, | in quo singula breviter recensentur ac describuntur, | quæ quidem Collecta hucusque servantur | In Museo | Francisci Beuth, | Missionarii Julio-Montensis. | Düsseldorfii | [ornate rule] | Typis J.A. Zebnpfenning S.E. Pelat. Cancellistæ. | 1776.

8°: [1]-181 p., 2 folding plates. RARE.

REFERENCES: Beckmann *P.O.B.*: 7, p. 334. • *Berlinische Sammlungen*: 9, p. 435 & 613. • BL: [B.390.(2.)]. • Cobres, *Deliciæ Cobresianæ*, 1782: 1, p. 145. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 102. • *Historische Studien und Skizzen zu Naturwissenschaft, Industrie und Medizin am Niederrhein*. Düsseldorf; 1898. [8], 134 p.; [2], 173, [16] p: [p. 89-92]. • *Leipziger allgemeines Verzeichniss*: 1776, p. 578. • LKG: XIV 320. • NUC: 51, 539. • Schmidt, Adolf., *Baron Hüpsch und sein Kabinett: ein beitrage zur geschichte der hofbibliothek und des museums*. Darmstadt, 1906. 295 p: [p. 37]. • Schröter's *Journal für die Liebhaber*: 4, p. 33.

586. Supplement, 1779: Continuatio Juliae et Montium Subterraneorum, sive Succinctus Mineralium Index. Dusseldorpii, Typis J.A. Zehnpfenning, 1779.

8°: A-F⁸ G⁴; 52ℓ.; [1]-101, [3] p., illus. RARE.

REFERENCES: *Historische Studien und Skizzen zu Naturwissenschaft, Industrie und Medizin am Niederrhein*. Düsseldorf; 1898. [8], 134 p.; [2], 173, [16] p: [p. 89-92].

• Roller & Goodman, *Catalogue*, 1976: 1, 114.

BEYSCHLAG, Joanne Friederich.

See: Hoffmann, Friedrich.

BIEHLER, Johann Heinrich. (BORN: 1633; DIED: 1698) *German mining expert.*

Biehler was superintendant ("Oberzehender") of mines in Saxony, Germany.

587. — German, 1735 [Sale catalog].

Catalogus über des Ober-Zehendner Biehlers Ertz= Stufen= Collection ..., welche lege auctio- nis auf den 23 May 1735 zu Dreßden dem Meist- biethenden ... zugeschlagen werden soll. Dresden, Krause, 1735.

4°: [1]-28 p., frontispiece (portrait of Biehler).

VERY SCARCE. Auction catalog consisting of 3,536 numbered lots of ore samples. The collection was made up of specimens found in the mines of Saxony.

REFERENCES: Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 6. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 261. • LKG: XV 9. • Wilson, *History of Mineral Collecting*, 1994: 161.

BINNINGER, Ludwig Reinhard. (BORN: Buschweiler, Alsace, Germany (now France), 1742; DIED: Buschweiler, Alsace, Germany (now France), 18 August 1776) *German physician.*

Binninger was city and state physicus at Buschweiler in Alsace.

REFERENCES: DBA: I 103, 96-97; II 125, 424-425. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 194. • WBI.

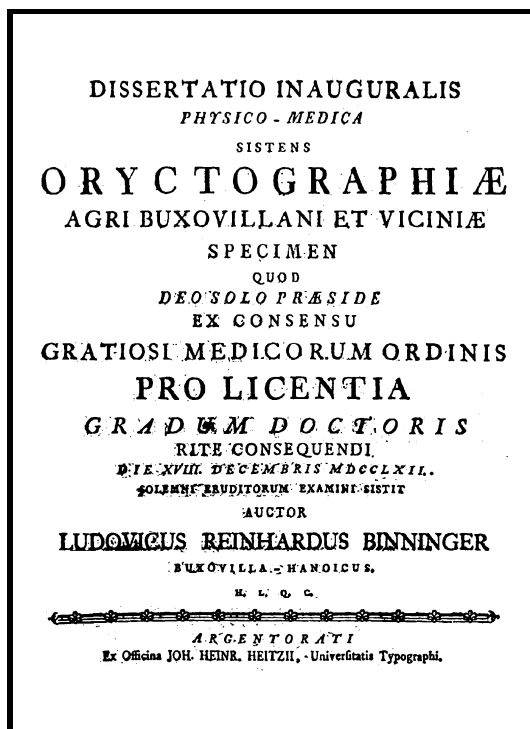
588. — Latin, 1762 [Dissertation].

Dissertatio Inauguralis | Physico-Medica | Sistens | Oryctographiæ | Agri Buxovillani Et Viciniæ | Specimen | Quod | Deo Solo Præsidi | Ex Consensu | Gratiosi Medicorum Ordinis | Pro Licentia | Gradum Doctoris | Rite Consequendi | Die XVIII. Decembris MDCCLXII. | Solemni Eruditorum Examini Sistit | Auctor | Ludovicus Reinhardus Binninger | Buxovilla-Hanoicus. | H.L.Q.C. [ornate rule] | Argentorati | Ex Officina Joh. Heinr. Heitzii, Universitatis Typographi.

4°: A-D⁴ E²; 18ℓ.; [1]-36 p. PAGE SIZE: 200 x 154 mm.

CONTENTS: [1-2], Title page, verso quotes from Hippocrates and Linnaeus.; [3-4], Dedication, signed Ludovicus Reinhardus Binninger.; [5]-6, "Prooemium."; 7-36, Text.

RARE. This dissertation describes the mineralogical geography in the territory surrounding Bruxelles in Belgium. Binninger describes the mineral waters,



ORYCTOGRAPHIÆ AGRI BUXOVILLANI, 1762

stones, marbles, earths and metals of the region. Included are references to the literature of the day such as Wallerius, Woltersdorff, Cronstedt, Pott, etc.

REFERENCES: BL: [B.229.(3.)]. • LKG: XIV 363. • NUC. • Ward & Carozzi, *Geology Emerging*, 1984: no. 217.

BION, Jean-Marie. (BORN: 1730; DIED: 1798) *French lawyer.*

REFERENCES: ABF: I 106, 84-92. • Beauchamp, *Biographie Moderne*, 1816. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

589. — French, 1791 [Collection catalog].

Inventaire des Diamans de la Couronne perles, pierreries, tableaux, pierres gravees, et autres monumens des arts et des sciences existans au garde-meuble: Inventaire fait en conformite des decrets de l'assemblee nationale-constituante des 26, 27 Mai et 22 Juin 1791, par ses commissaires MM. Bion, Christin et Delattre, deputes á l'Assemblée nationale, suivi d'un rapport sur cet inventaire, par M. Delattre. Imprimé par ordre de l'Assemblée Nationale. Première et seconde partie, a Paris, de l'Imprimerie nationale, 1791 ... Imprime par Ordre de l'Assemblée Nationale. Paris, 1791.

2 parts. 8°: [5], 276 p.; [4], 296 p. An inventory of the diamonds, pearls, and engraved stones held by the Revolutionary Government of France. PAGE SIZE: 210 x 130 mm. VERY RARE.

REFERENCES: LKG: XVI 241. • NUC. • Sinkankas,

BIRINGUCCI

Gemology Bibliography, 1993: no. 651. • *USGS Library Catalog*.

BIRINGUCCI, Vannoccio. (BORN: Sienna, Italy Born.; baptised, 20 October 1480; DIED: Rome, Italy, August 1539) *Italian metallurgist & chemist*.

As a young man, Biringuccio travelled throughout Italy and Germany, inspecting metallurgical operations, and working in them. After running an iron mine and forge at Boccheggiano for Pandolfo Petrucci, the ruler of Siena, he was forced to leave when Petrucci was overthrown. At some point he was in charge of a silver mine in Carinthia (until 1508). He was in Milan for a time and then in Ferrara in the service of Alfonso d'Este. When he returned to Siena with Petrucci, he was appointed (by Petrucci) to a post with arsenal at Siena and in 1513 director of the mint. In 1516, after the fall of the Petrucci family, he was exiled again. He returned with the Petrucci once more in 1523, and was exiled again in 1526. In the fighting in 1526 at Siena he commanded the artillery. Thereafter he served the Venetian and Florentine republics, and cast cannon and built fortifications for the Este and Farnese families. At some point he also served Pier Luigi Farnese, Duke of Parma. In 1531, with a new reconciliation he returned to Siena as senator and as architect and director of building construction at the Duomo. In 1534 he was appointed head of the papal foundry and director of papal munitions and captain of the papal artillery. His reputation is derived from the posthumous publication of his *Pirotechnia* (1540).

REFERENCES: ABI: II 65, 308-312; II S 11, 110. • *Dizionario Biografico Italiani*. • Lippmann, E.O.v., "Biringuccio und Agricola," *Isis*, 26 (1936), 37-8. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 474-5. • Mieli, A., "Vannoccio Biringuccio e il metodo sperimentale," *Isis*, 2 (1914), 90-9. • Mieli, *Gli Scienziati Italiani*, 1921: 1, 20-4. • *Nouvelle Biographie Générale* (Hofer). • Partington, J.R., "Biringuccio and Agricola," *Isis*, 26 (1936), 37-8. • Partington, J.R., "Vannoccio Biringuccio (early 16th century)," *Isis*, 24 (1935), 121. • Provenzal, *Bio-Bibliografici di Chimici Italiani*, 1938: pp. 5-10. • WBI.

590. — Italian, 1540 [First edition].

[Contained within an elaborate woodcut frame showing various metallurgical apparatus:] De La Piro-technia. | Libri. X. Dove Ampiamen | te si tratta non solo di ogni sorte & di- | uersita di Miniere, ma anchora quan | to si ricerca intorno à la prattica di | quelle cose di quel che si appartiene | a l'arte de la fusione ouer gitto de me | talli come d'ogni altra cosa simile à | questa. Composti per il. S. Vanoc- | cio Biringuccio Sennese. | Con Priuilegio Apostolico & de la | Cesarea Maesta & del Illustriss. Sena | to Venero. M D XL. [with rule over year].

4° (in 8s): 208 A-X8; 176ℓ.; no pagination but text leaves foliated. Title within ornamental border containing publisher's device. COLOPHON: Stampata in Venetia per Venturino Roffinello. Ad instantia di Curtio Nauo. & fratelli. Del M.CCCCC.XL. PAGE SIZE: 211 x 150 mm.

CONTENTS: [1 pg/=201r], Title page.; [1 pg/=201v], Dedication with a large device on the bottom half of the page.; [4 pgs/=202r-203v], "Tavola." (=table of contents); [10 pgs/=204r-208v], Text "Liber Primo."; ℓ. 1-ℓ. 168 (=A1r-X8r), Text.; [1 pg/=X8v], Blank.

RARE. Published posthumously, this book is



DE LA PIROTECHNIA, 1540

the first printed treatise covering the whole field of metallurgy, but it is also full of mineralogy, applied chemistry, gunpowder manufacture, military arts, typecasting and fireworks information. It is a practical work, mostly of original observations and based upon first-hand information gathered by the author during his lifetime of employment in mines, forges, mints, cannon foundries, and munitions works. Atypical of his time, Biringuccio is not prone to mystical speculation in his descriptions, and consequently the book is one of the most remarkable records of sixteenth century technology. Unfortunately, Biringuccio was gone by the time the manuscript reached publication, and consequently, some of the topics covered are not as clear as perhaps the author could have made them, had he lived.

The prologue of the text deals with the signs that indicate the occurrence of minerals. Among several indicators are the abundance of water since metals are formed in water and a test for mineralization by evaporating the water and subjecting the residue to assay by fire. Book I describes the ores of gold, silver, copper, lead, tin, iron, steel (which he thought was very pure iron) and brass. Book II covers the semi-minerals such as mercury, sulfur, antimony, marcasite, vitriols, alum, arsenic, orpiment and realgar, common salt, saltpeter, sal ammoniac, sal alkali, emery, borax, magnet, etc. Book III describes the preparation of ores for assaying and smelting. Book IV concerns the separation of gold and silver, with detailed instructions

for preparing nitric acid from saltpeter and pure alum. Book V describes common metal alloys and Book VI provides full instructions for casting bronze, including canon and bells. Books VII-VIII deal with foundry work, furnaces and casting. Book IX provides the first published description of the amalgamation process for extracting silver from its ores, by grinding in a mill with sublimate, verdigris, common salt, vinegar and mercury. Book IX deals with distillation, while Book X on pyrotechnics describes the preparation of incendiary mixtures, such as gun powder manufacture, bombs and other explosive devices.

Biringucci's description of metal alloys and their casting excels those of Ercker and Agricola, and his sections on glass, steel and the purification of salts by crystallization were copied by Agricola in his famous *De Re Metallica* (1st ed., Basileae, 1556). For its account of the methods of casting medallions, statues, and bells, the *Pirotechnia* is important in art history. Its also contains an important account of typecasting. In chemistry Biringucci includes the first account of silver amalgamation, and early descriptions of antimony, cobalt blue and manganese.

Facsimile reprint, 1914: *De la pirotechnia, 1540. Edizione, critica condotta sulla prima edizione, corredata di note, prefazioni, appendici ed indici, ed ornata dalle riproduzioni del frontespizio e delle 82 figure originali a cura di Aldo Mieli.* Vol. I. [All published]. Bari, Società Tipografica Editrice Barese, 1914. lxxxv, 198 p., illus. Published as: *Classici delle Scienze e della Filosofia. Serie Scientifica*, 1.

This was to be a definitive modern edition, but unfortunately ended with chapter 6 of Book II. A valuable account of Biringucci's life and analysis of the background and contribution of the *Pirotechnia* are included.

Facsimile reprint, 1977: *De la pirotechnia 1540. Vannoccio Biringuccio a cura di Adriano Carugo.* Milano, Il polifilo, 1977. 8°: lxxxvii p., 168 l., illus. Includes index. Bibliography, p. lvii-lviii]. Reprint of 1540 first edition, with an introduction in Italian and English.

German transl., 1925: *Pirotechnia. Ein Lehrbuch der chemisch-metallurgischen Technologie und des Artilleriewesens aus dem 6. Jahrhundert. Uebersetzt und erläutert von Otto Johannsen.* Braunschweig, Vieweg, 1925. 8°: [i]-xvi, [1]-544 p., 85 illus. A complete translation of the 1540 first edition by Otto Johannsen.

English transl., 1942: The | *Pirotechnia* | Of | Vannoccio Biringuccio | Translated From The Italian | With An Introduction And Notes | By | Cyril Stanley Smith | & | Martha Teach Gnudi | New York | The American Institute of Mining and Metallurgical Engineers | 1942. 8°: xxvi, 476, [2] p., frontispiece, illus., diags.

Published as part of the Seeley W. Mudd Series in an edition of 1,000 copies. The frontispiece is a facsimile of the title-page of the first edition of 1540. Bibliography, p. [462]-465.

English, 1959, reissue: New York, Basic Books, 1959. A photographic copy of the 1942 printing with additions to the bibliography.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "Foreword To The First Issue."—signed Harvey S. Mudd, April 1942.; [vii-viii], "Foreword To The Reissue."—signed Cyril Stanley Smith, November 1958.; [ix]-xxv, "Introduction."; xxvi, "Acknowledgements."; [1 pg], "Fire."; [1 pg], Facsimile of 1540 title page.; [1 pg], Title page of 1943 edition.; [1 pg], Blank.; [1], "De La Pirotechnia."; [2], "Curtio Navo, ..."; [3]-7, Table of contents.; [8], Blank.; [9]-12, "List Of Illustrations."; [13]-25, "...Preface To The First Book."; 26-446, Text of translation.; [447]-456, "Appendix

A. Figures from other sources."; [457]-458, "Appendix B. Weights and Measures."; 458-461, "Appendix C. List of Editions."; [462]-466, "Appendix D. Bibliography."; [467]-477, "Index."; [1 pg], Blank.

REFERENCES: (1540) Adams, *Cambridge Books*, 1967: B-2080. • Brunet: 1, 954. • Cockle, *Bibliography of Military Books*, 1900: 931. • Darmstädter, *Berg-Büchlein*, 1926: p. 80. • Dibner, *Heralds of Science*, 1955: 38. • Hoover & Hoover, *Agricola, "De Re Metallica"*, 1912: 614-5. • Hoover Collection: no. 129. • Johannsen, O., "Biringuccio und seine 'Pirotechnia'," *Beiträge zur Geschichte Technische Industrie*, 16 (1926), 153-61. • McKie, D., "Sir Thomas Browne and Biringuccio's 'Pirotechnia'," *Nature*, 163 (1949), 628. • Mieli, *Gli Scienziati Italiani*, 1921. • Mortimer *Italian Books*: no. 66. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 467. • Norman Catalog: no. 238. • Parkinson, *Breakthroughs*, 1985: p. 37. • Partington, *History of Chemistry*, 1961-70: 2, 31-7. • Roller & Goodman, *Catalogue*, 1976: 1, 120. • Smith, C.S., "Biringuccio's 'Pirotechnia' — a neglected Italian metallurgical classic," *Mining & Metallurgy*, 21 (1940), 189-92. • (English, 1942) *Isis*: 34 (1943), 514-6. [review]. • (English, 1959) *Discovery*: 22 (1961), 36-7 [review]. • *Journal of Chemical Education*: 36 (1959), 532-A638 [review]. • Wellcome Catalog (Books): 1, no. 873.

591. 2nd edition, 1550: *Pirotechnia.* Li dieci libri della pirotechnia, nellquali si tratta non solo la diuersita delle minere, ma ancho quanto si ricerca alla pratica di esse: e di quanto s'appartiene all' arte della fusione ouer getto de metalli, e d' ogni altra cosa a questa somigliante. Composti per il S. Vannuccio Biringuccio ... [Vinegia, Per Giouan Padoano, a instantia di Gurtio di Nauo] 1550.

8°: ⚙ 8 A-X⁸; 176ℓ.; [16] p., 167 numbered leaves, [2] p., illus. Leaves 126 and 164, misnumbered 124 and 146. Title within ornamental border containing publisher's device. Leaves printed on both sides. COLOPHON: In Vinegia, per Giouan Padoano, a instantia di Gurtio (i.e., Curtio) di Nauo. MDL.

VERY SCARCE. The text has been reset in a newer type and the illustrations are from the same blocks as the first edition.

REFERENCES: BM/STC *Italian*: p. 106. • Brunet: 1, p. 357. • Hoover Collection: no. 130. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 468. • Shaaber, *Sixteenth Century Imprints*, 1976: B-416.

592. 3rd edition, 1558/9: [Contained within an elaborate woodcut frame showing various metallurgical apparatus:] *Pirotechnia.* | Li Diece Libri Della | *Pirotechnia*, | Nelli quali si tratta non solo la diuersità del- | le minere, ma ancho quanto si ricerca alla | pratica di esse: e de quanto s'appar- | tiene all'arte della fusione ouer | getto de metalli, e d'ogni | altra cosa à questa so | migliante. | Composta Per Il S. | Vannuccio Biringuccio, | nobile Senese. | Col Privilegio Apostolico, | e della C. Maestà, e dell' Illustri^{ss}. Senato Veneto. | [rule] | M D LVIII.

8°: ⚙ 8 A⁴ B-X⁸; 176ℓ.; [8], 168 numberedℓ., illus. Title within ornamental border containing publisher's device of Curzio Navo; publisher's device on leaf 168r. COLOPHON: In Vinegia per Comin da Trino di Monferrato. M D LIX. PAGE SIZE: 202 x 148 mm.

CONTENTS: ★1r, Title page.; ★1v, "Al Molto Reverendo Monsig."; ★2r-★3v, "In Comincia La Tavola Di Tvtto Il | ..." [=table of contents]; ★4r-★8v, "Il Proemio Nella Pirote- | ctnia Del Signor Vannvccio."; Folios, 1-168r (=A1r-X8r), Text.; 168v (=X8v), Blank.

VERY SCARCE. Utilizes the same blocks as the first editon of 1540.

REFERENCES: Gamba: 1261. • Hoover Collection: no. 131. • Roller & Goodman, *Catalogue*, 1976: 1, 120. • Shaaber, *Sixteenth Century Imprints*, 1976: B-417. • Wellcome Catalog (Books): 1, no. 874.

593. 4th edition, 1559: *Pirotechnia* | Dell's. Vannuccio Biringuccio | Senese; Nella Qvale Si Tratta Non | solo della diversita delle minere, ma ancho di | quanto, si ricerca alla

BISCHOF

pratica di esse. E di | quanto s'appartiene all'arte della | fusione, ò getto, de metalli. | Far Campane, Arteglierie, | fuochi artificiat, & altre diuerse | cose utilissime. | Nuouamente Corretta, Et Ristam- | pata. Con la tavola della cose notabili. | [ornament] | In Venetia | Appresso P. Gironimo Giglio, e compagni. | [rule] | M. D. LIX.

8^o: a-z⁸ aa-xx⁸; 352ℓ.; [1]-345, [7]ℓ., 84 text woodcuts (reduced, reverse copies of earlier cuts; showing various furnaces and tools in use). Printer's device on title. Historiated initials. PAGE SIZE: 148 x 95 mm.

VERY SCARCE. Unlike the previous Navo editions, this is the first text to be printed in italics. It is based upon the 1550 edition, but the illustrations have been recut by an inferior artistian, and commonly fail to show sufficient detail.

REFERENCES: BM/STC *Italian*: p. 106. • Brunet: 1, 357. • Mortimer *Italian Books*: no. 66. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 469. • Shaaber, *Sixteenth Century Imprints*, 1976: B-418.

594. 5th edition, 1678: *Pirotechnia* | del Signor | Vannvccio Biringuccio | Senese, | Nella quale si tratta non solo della diuersità delle Minere, | ma anco di quanto si ricerca alla pratica di esse, e che | s'appartiene all' arte della fusione, | ò getto de Metalli. | Far Campane, Artigliarie, fuochi artificiat, & altre | diuerse cose vtilissime. | Nuouamente corretta, e ristampata, con le Figure appropriate | à suoi luoghi, e due Tauole l'vna de Capitoli, | e l'altra delle cose Notabli |. | [rule] | Dedicata | All' Illustriss. & Eccellentiss. Sig. e Padron Colendiss. | Il Signor Marchese | Givseppe Montecvccoli. | [ornament] | In Bologna, per Gioseffo Longhi. | [rule] | Con Licenza de' Speriore.

8^o: a-b⁸ A-Pp⁸ Qq¹¹; 331ℓ.; [32], [1]-630 p., 84 illus. Title within rule borders including coat of arms of dedicatee, Giuseppe Montecuccoli. Edited by Natale Doriguzzi, who also signs the dedication

CONTENTS: [2 pgs], Title page, verso blank.; [5 pgs], Dedicaton.; [1 pg], "Licence."; [23 pgs], Preface.; [1 pg], Blank.; 1-615, Text.; 616-622, Contents.; 623-630, Index.

VERY SCARCE. This edition is dedicated by the publisher, Natale Doriguzzi, to the Marchese Giuseppe Montecuculi, brother of the famous Raymond [1608-1680]. It follows the 1559 edition in general format and size. Once again the illustrations have been recut, and are again inferior to the first editions.

REFERENCES: BL: [957.b.37.]. • Cole, *Chemical Literature*, 1988: no. 155. • Duveen, *Bibliotheca Alchemica et Chemical*, 1965: p. 641. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 470. • NUC: [NB 0501075]. • Wellcome Catalog (Books): 1, 170.

French editions

595. French transl., 1st edition, 1556: *La pyrotechnie, ov art dv fev, contenant dix livres, avsqvls est amplement traicté de toutes sortes & diuersité de minieres, fusions & separations des metaux: des formes & moules pour getter artilleries, cloches & toutes autres figures: des distillations, des mines, contremines, pots, boulets, fusees, lances, & autres feuz artificiels, concernans l'art militaire, & autres choses dependantes du feu. Composée par le Seigneur Vanoccio Biringuccio Siennois. Et traduite d'Italien en François, par le feu maistre Jaques Vincent ... A Paris, Chez Claude Fremy a l'Enseigne S. Martin, rue S. Jaques, 1556.*

4^o: *4 a-z⁴ A-Kk⁴ Ll⁶; 234ℓ.; [4]ℓ., 228 (i.e., 230) numb.ℓ., illus. Title vignette.

RARE. although the royal privilege is dated 1552, this book was not published until 1556. It is a translation by "feu maistre" Jaques Vincent, and is dedicated to Jehan de la Marche. The text is excellently printed and the illustrations well copied. However, the translation is not particularly good, having omissions, condensations and misinterpretations. It was the three French editions that most English writers have used for source material, thereby providing a false interpretation of Biringucci's ideas.

REFERENCES: Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 471. • Shaaber, *Sixteenth Century Imprints*, 1976: B-419.

596. French transl., 2nd edition, 1572: *La pyrotechnie, ov Art dv fev, contenant dix livres, avsqvls est amplement traicté de toutes sortes & diuersité de minières, fusions & separations des metaux, des formes & moules pour getter artilleries, cloches & toutes autres figures, des distillations, des mines, contremines, pots, boulets, fusees, lances, & autres feuz artificiels, concernans l'art militaire, & autres choses dependantes du feu, composée par le Seigneur Vanoccio Biringuccio Siennois. Et traduite d'Italien en François, par le feu maistre Jaques Vincent. A Paris, Chez Claude Fremy, 1572.*

8^o: [4], 168ℓ., illus.

VERY SCARCE. The text is reset in a smaller type from the French 1556 edition.

REFERENCES: Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: 472. • Wellcome Catalog (Books): 1, no. 875.

597. French transl., 3rd edition, 1627: *La Pyrothécnie, ou Art du Feu, contentant dix livres. Ausquels est amplement Traicté de toutes fortes & diversité de Minieres, Fusions & separations des Metaux: des Formes & moules pour jetter Artilleries, cloches & toutes autres figures: des distillations, des Mines, contremines, pots, boulets, fusees, lances, & autres feux artificiels, concernans l'Art Militaire, & autres choses dependantes du Feu. Composée en Italien ... Et depuis Traduite en François par Jacques Vincent. Rouen, Chez Jacques Cailloüé, 1627.*

4^o: [2]ℓ., 228 (i.e., 230)ℓ., [2]ℓ., illus. Woodcut vignette on title, 84 small panel woodcuts in the text (mostly numbered), woodcut initials and head- and tail-pieces.

SCARCE. The work was first translated into French in 1556.

REFERENCES: *Kress Catalogue*: S.581.

BISCHOF, Karl August Lebrecht. (BORN: Neuhaus, near Meissen, 3 August 1762; DIED: Munich, Bavaria, Germany, 23 January 1814) *German teacher.*

Father of Karl Gustav Christoph Bischof [see next entry], he was teacher of history, geography and natural history at a Bavarian orphanage.

REFERENCES: ADB. • DBA: I 104, 224-231; II 127, 396. • Eitner, *Quellenlexikon*, 1959. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, col. 201. • WBI. • Will, *Nürnbergisches Gelehrten-Lexicon*, 1755-1808.

598. — German, 1791.

Physisch-technologisches Handbuch. Oder vollständige Nachricht und Beschreibung aller Naturprodukte und ihrer Zubereitungen zu allgemeinen und besondern menschlichen Bedürfnissen ... von Karl August Bischof ... Mit Kupfern. Nürnberg, Im Verlag der Raspischen Buchhandlung, 1791.

2 parts in one volume. 8^o: xvi, 352, [4], 290, [26] p., 17 plates (including frontispiece).

VERY SCARCE. A textbook of technology for adolescents describing natural products and their industrial treatment. It is written in the form of a narrative in which a father instructs his son while traveling through different cities. The first part deals with agriculture, forestry, gardening, viticulture, fishing, hunting, mineralogy, ship building. art works (including a section on clocks and watches and one on glassmaking, both with illustrations), musical instruments, hydraulics. mining, and commerce.

The second part deals with the production of food stuffs, textiles, and leather, architecture, wood- and metalwork, gold and silver, pottery, oil production, paper making, soap and candle making, glass making, pharmacology, printing, bookbinding, engraving, electricity, and gunpowder.

REFERENCES: Hoover Collection: no. 132.

BISCHOF, Karl Gustav Christoph. (BORN: Wörd near Nürnberg, Bavaria, Germany, 18 January 1792; DIED: Bonn, Germany, 30 November 1870) *German geologist & geochemist.*

Son of Karl August Lebrecht Bischof [see previous entry], he was educated at Erlangen. In 1819, he was appointed extraordinary professor and in 1822 ordinary professor of chemistry at the University of Bonn. He remained at that post until his death. He was elected a Fellow of the Geological Society of London. Bischof is regarded as the founder of geochemistry.

REFERENCES: ADB: 2, 665-9. • Barr, *Index to Biographical Fragments*, 1973: 24. • Callisen, *Medicinisches Schriftsteller-Lexicon*, 1830-45: 2 (1830), 273-80. • DBA: I 104, 232-235; II 127, 397-403. • Diergart, P., "Zur Stellung von Karl Gustav Bischof (Bonn) in der Chemie des 19. Jahrhunderts" (pp. 195-203, in: *Studien zur Geschichte der Chemie, Festgabe Edmund O. von Lippmann zum siebzigsten Geburtstag dargebracht*. Berlin, Springer, 1927. • DSB: 2, 158-9 [by G.C. Amstutz]. • Ferchl. • Fruton, *Bio-Bibliography*, 1982: 68. • *Isis*: 21 (1934), 123-30 [by M. Nierenstein]. • *ISIS*, 1913-65: 1, 155. • Lambrecht & Quenstedt, *Catalogus*, 1938: 41. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 475. • NDB: 2, 261-2 [by E. Krenkel]. • Poggendorff: 1, cols. 201-2, 3, 134 & 7a, 90-1. • Rath, G., "Die Bonner Pharmakologen Bischoff und Albers," *Sudhoffs Archiv*, 37 (1953), 122-30. • Sarjeant, *Geologists*, 1980: 2, 559-60. • Schaedler, *Biographisch Handwörterbuch*, 1891: 12-3. • *Sudhoff's Archiv*: 37 (1953), 122-30 [by G. Rath]. • Thomas, *Dictionary of Biography*, 1884: 362. • WBI. • *World Who's Who in Science*: 181. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 81-2.

599. — German, 1847-55.

Lehrbuch | der | chemischen und physikalischen |
Geologie | von | Dr. Gustav Bischof, | [...4 lines
of titles and memberships...] | [ornate rule] | Erster
Band. | Mit 2 lithographirten Tafeln und 22 in den
Text gedruckten | Abbildungen. | [ornate rule] |
Bonn, | bei Adolph Marcus. | 1847.

[TITLE OF VOL. 2, PT. 1 READS:]

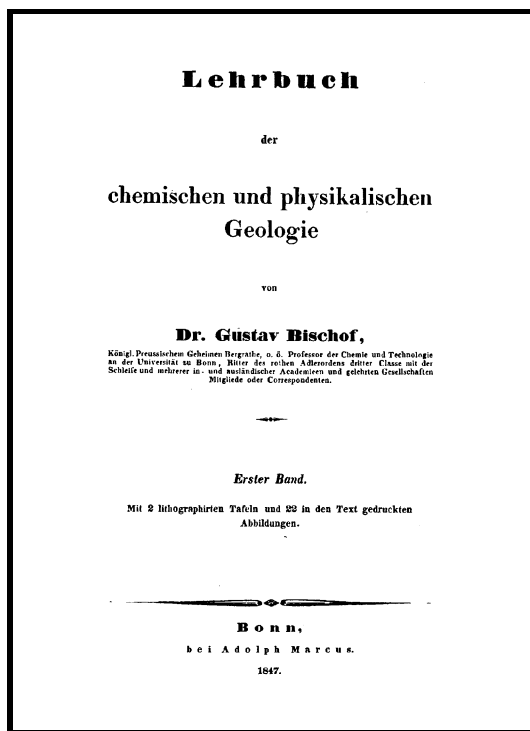
Lehrbuch | ... | Zweiten Bandes erste Abtheilung.
| ... | 1851.

[TITLE OF VOL. 2, PT. 2 READS:]

Lehrbuch | ... | Zweiten Bandes zweite Abtheilung.
| ... | 1855.

2 vols. bound in three. [VOL 1: 1847] 8°: π^8 ★★⁸
★★★¹ 1-61⁸ 627; ??ℓ.; [i]-xxxiv, [1]-989, [1] p., 2 plates
(volcanoes). [VOL 2, pt. 1: 1851] 8°: π^2 ★⁸ 1-54⁸ 55¹; [i]-
xx, [1]-844 p. [VOL 2, pt. 2: 1855] 8°: π^8 ★★⁸ ★★★² 552-8
56-148⁸ 149⁵; ??ℓ.; [i]-xxxvi, [845]-2352 p., one folding
plate (agates).

Some sources say: 2 vols. bound in 4. 8°: [VOL 1]
xxxiv, 990 p., 20 figs., 2 plates; [VOL 2] xx, 844 p.; [VOL
3] xxxvi, 845-1666 p.; [VOL 4] [2], 1667-2512 p., double
page engraved plate. SHOULD BE: 2 vols. bound in
4. 8°: [Vol 1] xxxiv, 990 p., 20 figs., 2 plates; [Vol 2]



LEHRBUCH, 1847

xx, 844 p.; [Vol 3] xxxvi, 845-1666 p.; [Vol 4] [2], 1667-2512 p., double page engraved plate. PAGE SIZE: 224 x 140 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-vi, Dedication, signed Gustav Bischof, 24 June 1847.; [vii]-xviii, "Vorrede."—dated June 1847.; [xix]-xxxiv, "Inhalt.;" [1]-989, Text.; [1 pg], "Berichtigungen und Zusätze.;" [At end], 2 plates.

[Vol 2, pt. 1] [i-ii], Title page, verso blank.; [iii]-iv, "Vorwort."—dated November 1851.; [v]-xx, "Inhalt.;" [1]-844, Text.

[Vol 2, pt. 2] [i-ii], Title page, verso blank.; [iii]-viii, "Vorwort."—signed Gustav Bischof, August 1854.; [ix]-xxxvi, "Inhalt.;" [845]-2352, Text.

SCARCE. In 1848 Bischof began to publish his enormous *Lehrbuch der chemischen und physikalischen Geologie*, which soon became the standard geochemical text, and helped to found the studies of geochemistry and petrology. It supported a new line of thought, the 'neoneptunistic'. Bischof in his first volume is clearly a plutonist and opposed neptunist views; however, as the work progressed, and he made the intensive studies in connection with the *Lehrbuch*, he became more convinced of the large role water played in the geological process. His discussion of this role and the thoughts put down in the *Lehrbuch* acted as a catalyst on further research in geochemistry and petrology throughout the 19th century, especially in Europe.

Having a chemical background made Bischof's experimental work eminently sound, although some of his generalizations as applied to petrology and the geological process failed. The first volume of the

Lehrbuch is concerned with various aspects of hydrology and the effect of water on rock surfaces, in pore and joint spaces, and in subterranean passages. His scientific account of springs is well illustrated with observations of such phenomena in the Rhine Valley. He was among the first to repudiate the plutonic theory for the origin of large salt beds, attributing them instead to the desiccation of large lakes as evidenced by the Dead and Caspian seas. He also investigated water as a chemical reagent under the regime of weathering, and also as a hydrothermal and hydration agent.

With respect to coal, Bischof concluded that the characteristic chemical and physical constitution of the different varieties of coal had been determined by the amount of air admitted and the accompanying heat and pressure. Thus he estimated that because of the substance lost in the process of coalification, it took 80 feet of plant material to yield three feet of coal.

The second volume of his work dealt with chemical mineralogy and petrology. Even today, the work retains its high value because of the numerous and careful rock analyses. However, his generalizations were formulated around the Neptunian Theory. Therefore he concluded that all rock minerals except augite and leucite could have originated from aqueous solutions under atmospheric temperature and pressure and that their origin from fused rock was exceptional. These conclusions were based on the similarity of the chemical composition of many volcanics with that of graywacke and slate. In one of his many experiments, Bischof melted large balls of basalt and by observations of their cooling period, he calculated that the complete solidification of the earth took 350 million years. Bischof, together with his contemporaries, Roemer, Goldfuss, and Vom Rath, made the University of Bonn one of the leading schools in geological research during the middle 19th century.

REFERENCES: DSB: 2, 158. • Roller & Goodman, *Catalogue*, 1976: 1, 121. • Zittel, *Geschichte der Geologie*, 1899. • Zittel, *History of Geology*, 1901.

600. 2nd edition, 1863-6: Lehrbuch | der | chemischen und physikalischen | Geologie | von | Gustav Bischof. | [rule] | Erster [-Dritter] Band. | Zweite gänzlich umgearbeitete Auflage, | in gedrängter Kürze, mit Zusätzen und Verbesserungen. | Mit einer colorirten Karte. | [tapered rule] | Bonn, | Bei Adolph Marcus. | 1863 [-1866].

3 vols. [VOL 1: 1863] 8°: [i]-xv, [1], [1]-865, [1] p. [VOL 2: 1864] 8°: [i]-xv, [1], [1]-952 p. [VOL 3: 1866] 8°: [i]-xvi, [1]-974 p. PAGE SIZE: 218 x 130 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "Das Recht der Uebersetzung..."; [iii], Dedication to the Geological Society of London.; [iv], Blank.; [v]-x, "Vorrede."—dated 1 October 1863.; xi-xv, "Inhalt."; [1 pg], Blank.; [1]-865, Text.; [1 pg], Blank.

[Vol 2] [i-ii], Title page, verso "Das Recht der Uebersetzung..."; [iii], Dedication to Académie des Sciences in Paris.; [iv], Blank.; [v], "Vorwort."—dated 4 May 1864.; [vi], Blank.; [vii]-xv, "Inhalt."; [1 pg], Blank.; [1]-952, Text.

[Vol 3] [i-ii], Title page, verso "Das Recht der Uebersetzung..."; [iii], Dedication to the Decan at Doctoren-Collegium.; [iv], Blank.; [v]-vii, "Vorrede."; [x]-xvi, "Inhalt."; [1]-912, Text.; [913]-974, Name and subject indexes.

SCARCE. Although called a second edition, this is in

essence a continuation of the original volumes.

English edition

601. English transl., 1854-9: Elements | of | Chemical And Physiscal | Geology. | By | Gustav Bischof, Ph.D. | Professor Of Chemistry And Technology In The University Of Bonn. | Translated From The Manuscript Of The Author, By | Benjamin H. Paul, F.C.S., | and | J. Drummond, M.D. | Vol. I. [-III.] | London: | Printed For The Cavendish Society, | By Harrison & Sons, St. Martin's Lane. | 1854 [-1859].

3 vols. [VOL 1: 1854] 8°: π^4 b⁸ B-Ff⁸ Gg⁴; 240ℓ.; [i]-xxiii, [1], [1]-455, [1] p. [VOL 2: 1855] 8°: π^8 b⁴ B-Kk⁸ Ll⁴ Mm²; 574ℓ.; [i]-xxiv, [1]-523, [1] p. [VOL 3: 1859] 8°: π^9 B-Nn⁸ Oo³; 292ℓ.; [i]-xvii, [1], [1]-566 p. PAGE SIZE: 216 x 138 mm.

CONTENTS: [Vol 1] [i-ii], "Works | Of The | Cavendish Society. | [ornament] | [rule] | Founded 1846. | [rule]," verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, "Introductory Remarks."—signed Gustav Bischof, June 1854.; [ix]-xxiii, "Table Of Contents."; [1 pg], Blank.; [1]-455, Text.; [1 pg], Blank.

[Vol 2] "Works | Of The | Cavendish Society. | [ornament] | [rule] | Founded 1846. | [rule]," verso blank.; [iii-iv], Title page, verso blank.; [v]-xxiv, "Table Of Contents."; [1]-523, Text.; [1 pg], Blank.

[Vol 3] "Works | Of The | Cavendish Society. | [ornament] | [rule] | Founded 1846. | [rule]," verso blank.; [iii-iv], Title page, verso blank.; [v], "Preface."—signed Benj. H. Paul, January 1859.; [vi], Blank.; [vii]-xvii, "Table Of Contents."; [1], "Erratum."; [1]-556, Text.; [557]-566, "Index."

SCARCE. English translation by Benjamin H. Paul and J. Drummond of the original manuscript that became *Lehrbuch der chemischen und physikalischen Geologie* (1st ed., 1847). The appendix that was published with the original was not translated.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 121.

BIXBY, Maynard. (BORN: Vermont, U.S.A., 1853; DIED: Salt Lake City, Utah, U.S.A.?, after 1920) *American mineral dealer & collector.*

Bixby was a professional "rockhound" in the truest meaning of that description. He collected minerals from the Tintic and other Utah mining districts. These specimens, which he sold from his Salt Lake City premises at 539 Atlas Block, now reside in many of the world's finest museums. The mineral species "Bixbyite," which he first discovered, is named in his honor.

REFERENCES: Bixby, M.H. and W.G. Bixby, *A Genealogy of the Descendents of Joseph Bixby, 1621-1701 of Ipswich and Boxford, Massachusetts*. New York, W.G. Bixby, 1914. • *Mineral Collector*: 4 (1898), no. 10, 159. • Personal communication [Wendell Wilson]. • U.S. Federal Census: 1920 [Salt Lake City, Ward 1, Precinct 5].

602. — English, 1902 [First edition].

A Catalogue Of | Utah | Minerals And Localities | With Descriptive List, | And Notes for Collectors | —by— | Maynard Bixby. | [ornate rule] | Salt Lake City, Utah. | 1902.

8°: [1]-22 p. Printed wrappers. PAGE SIZE: 202 x 116 mm.

CONTENTS: [1-2], Title page, verso "Copyright, 1902, | by | Maynard Bixby."; [3]-22, "Mineral Localities."

VERY RARE. This pamphlet provides a list of minerals species together with their properties, which are found within the state of Utah. It is the first independent publication dealing with the minerals of

the region. One section of the text provides notes for collectors.

REFERENCES: NUC: 59, 221 [NB 0514066].

603. 2nd edition, 1902: A Catalogue Of | Utah | Minerals And Localities | With Descriptive List, | And Notes for Collectors. | -by- | Maynard Bixby. | Salt Lake City, Utah. | 1902. | [ornate rule] | by | Maynard Bixby. | (Second Ed.).

8°: [1]-23, [1] p. Printed wrappers. PAGE SIZE: 204 x 118 mm. VERY RARE.

CONTENTS: [1-2], Title page, verso "Copyright, 1902, | by | Maynard Bixby."; [3]-23, "Mineral Localities."; [1 pg], Blank.

REFERENCES: BMC: 6, 94. • NUC: [no copy listed].

604. 3rd edition, 1904: A Catalogue Of | Utah | Minerals And Localities | With Descriptive List, | And Notes for Collectors. | -by- | Maynard Bixby. | Salt Lake City, Utah. | 1904. | [ornate rule] | Copyright, 1902, | by | Maynard Bixby. | (Third Ed.)

8°: [1]-24 p. Printed wrappers. PAGE SIZE: 202 x 116 mm. VERY RARE.

CONTENTS: [1-2], Title page, verso "Copyright, 1904, | by | Maynard Bixby."; [3]-24, "Mineral Localities."

REFERENCES: NUC: [no copy listed].

605. 4th edition, 1916: A Catalogue Of | Utah Minerals | And Localities | With Descriptive List | And | Notes For Collectors | [rule] | By Maynard Bixby | Salt Lake City, Utah | Copyright. 1916 by Maynard Bixby | [rule] | Fourth Edition | Enlarged and Revised.

8°: [1]-32 p. Printed wraps. PAGE SIZE: 195 x 115 mm.

CONTENTS: [1], Title page.; [2], "Compliments of | R.H. Officer & Co."; [3]-13, "Localities Of Minerals."; 14-17, "Notes For Collectors Of Minerals."; 18-32, "Rare Minerals."

VERY RARE. Bixby's final and most complete compilation arranged along the same lines as the other editions was apparently given away as a promotional device by a Salt Lake City chemical company. This is indicated on the verso of the title page: "Compliments of R.H. Officer & Co."

Facsimile reprint, 1959: A Catalogue of Utah Minerals and Localities with Descriptive List, and Notes for Collectors ... With Index of Mineral Species added by the Utah Geological and Mineralogical Survey. Reprint No. 60, Utah Geological and Mineralogical Survey. Salt Lake City, Utah, reprinted May 1959. 8°: [4], [3]-32, [3] index, [7] adverts. p.

Scarce. This reprint has brief notes on Bixby and a reprint of the 4th edition of the *Catalogue* together with a complete index.

REFERENCES: NUC: 59, 221 [NB 0514067].

BLACK, George F.

606. — English, 1916 [Bibliography].

List of Works relating to the Geology, Mineralogy, and Palaeontology of New Jersey. New York, New York Public Library, 1916.

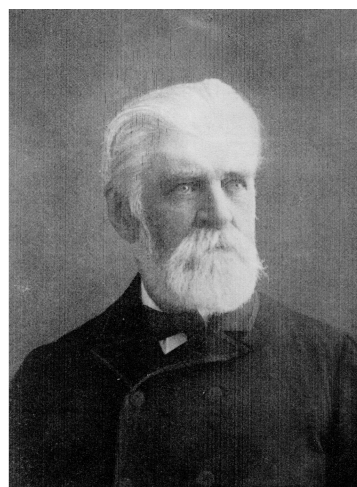
Centerstapled; 36 p. Printed wraps.

RARE. First separate issue of a bibliography that first appeared in the *Bulletin of the New York Public Library* (June, 1916).

REFERENCES: NUC. • *USGS Library Catalog*.

BLAKE, William Phipps. (BORN: New York City, New York, U.S.A., 1 June 1826; DIED: Berkeley, California, 22 May 1910) *American mineralogist, geologist & mining expert*.

Blake was educated at Yale (chemistry, Ph.D., 1852) and received an advanced degree from the University of



BLAKE

California at Berkeley (LL.D., 1910). From 1852 to 1854, he worked as a chemist for the New Jersey Zinc Company. In 1854, he was appointed geologist for the Pacific Railroad Survey, a post that occupied him until 1856. Blake then became a mining consultant. In this capacity he made an extensive examination of the mineral resources of North Carolina, and founded in 1859, the *Mining Magazine*, of which he was editor. At the behest of the government, he was among the first foreigners to examine from 1861 to 1863 the mineral resources of Japan. On his return he explored the Stickeen River region of Alaska, and discovered the Stickeen glacier. In 1864, he became state mineralogist for California. From 1895 until 1905, Blake was the professor of geology and mining as well as director of the School of Mines at the University of Arizona. He also took on the added responsibility in 1898 of becoming the territorial mineralogist for Arizona.

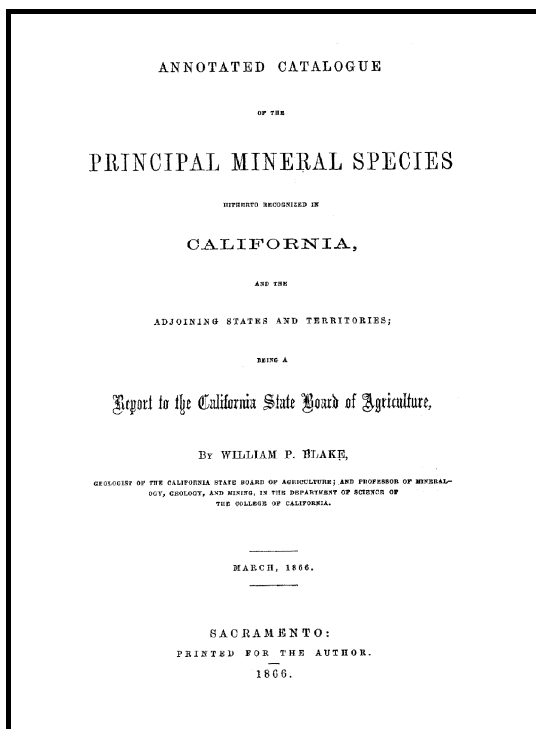
REFERENCES: ABA: I 134, 334-347; II 51, 116. • *American Journal of Science*: 4th Series, 30 (1910), 95-6. • *American Men of Science*, 1st edition (1906). • *Bulletin of the Geological Society of America*: 22 (1911), 36-47, portrait [by R.W. Raymond]. • DAB. • Dill, D.B., "William Phipps Blake, Yankee gentleman and pioneer geologist of the far east," *The Journal of Arizona History*, 32 (1991), no. 1, 385-412, 11 illus. • Elliott, *Biographical Index*, 1990: 22. • Elliott, *Biographical Dictionary*, 1979: 32. • Keyes, C.B., "William Phipps Blake; pioneer of the southwest," *Pan-American Geologist*, 72 (1939), no. 1, p. 1-8, portrait. • *Mineralogical Magazine*: 16 (1911), no. 71, 157 [by L.J. Spencer]. • *National Cyclopaedia of American Biography*: 10, 25. • Sarjeant, *Geologists*, 1980: 2, 567. • *Science*: 31 (1910), 853. • WBI. • *World Who's Who in Science*: 186.

607. — English, 1866.

Annotated Catalogue | Of The | Principal Mineral Species | Hitherto Recognized In | California, | And The | Adjoining States And Territories; | Being A | Report to the California State Board of Agriculture, | By William P. Blake, | [...3 lines of titles and memberships...] | [rule] | March, 1866. | [rule] | Sacramento: | Printed For The Author. | [rule] | 1866.

8°: [1]-31, [1] p. PAGE SIZE: 224 x 140 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], Letter to I.N. Hoag from W.P. Blake, dated 6 March 1866.; [4], Blank.; [5]-6, "Authors And Publications | Upon



ANNOTATED CATALOGUE, 1866

The | Mineralogy Of California.”; [7]-24, Text [=list of mineral species]; [25]-26, “Principal Public And Private | Mineralogical And Geological Collections | In California, | Known To The Author.”; [27]-31, “Notes on the Geographical Distribution and Geology | Of The | Precious Metals And Valuable Minerals | On The | Pacific Slope Of The United States.”; [1 pg], “Errata.”

VERY SCARCE. The first independent list of mineral species found in California. The first section provides a list of 27 earlier references that Blake consulted in the preparation of this work. Following is an alphabetical list of mineral species, which includes locality information. Blake includes a list of the public and private collections of minerals in the state and a short description of where the mineralization occurs.

REFERENCES: NUC.

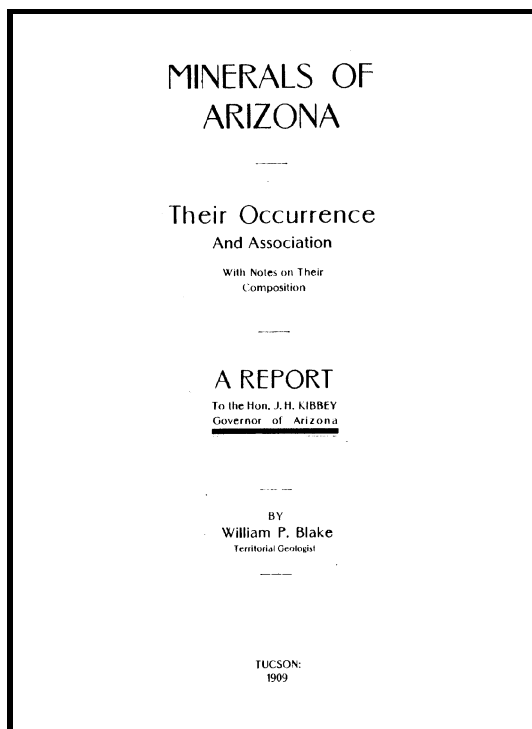
608. — English, 1909.

Minerals Of | Arizona | [rule] | Their Occurrence
| And Association | With Notes on Their |
Composition | [rule] | A Report | To the Hon.
J.H. Kibbey | Governor of Arizona | [rule] | [rule]
| By | William P. Blake | Territorial Geologist |
[rule] | Tucson: | 1909.

[1]-64 p. PAGE SIZE: 214 x 130 mm.

CONTENTS: [1-2], Title page, verso blank.; 3-64, Text
[=list of species].

VERY SCARCE. The first independent list of minerals found in the Territory of Arizona. Under each species, the known localities are described. A second part at the end lists the “Materials of Construction,”



MINERALS OF ARIZONA, 1909

which describes rocks and gravel used in construction.
REFERENCES: NUC.



BLANK

BLANK, Joseph Bonavita. (BORN: Würzburg, Germany, 22 March 1740; DIED: Würzburg, Germany, 26 February 1827) *German naturalist, mineralogist & art collector.*

Blank was a member of the Franciscan order and professor of philosophy and natural history at the University of Würzburg. He was also appointed curator of the University's art and natural history collections. In this

position, he continued to successfully add to the collections, most especially when his own immense personal collections of art and natural history specimens were acquired by the University.

REFERENCES: ADB: 2, 689. • Blank, J.B., *Kurze Lebensbeschreibung. Mit dessen Bildnisse*. Würzburg, Stahel, 1819. [i]-viii, [1]-111, [1] p., frontispiece (portrait of Blank). [Autobiography of Blank, written in the third person with a bibliography.]. • DBA: I 106, 170-192; II 131, 169; 131, 196-202. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 209. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50. • WBI.

609. — German, 1795.

Naturalien-Cabinet in dem Minoriten sogenannten Franciscaner-Kloster zu Würzburg gesammelt und geordnet von Bonavita Blank ... Würzburg, F.X. Rienner, 1795.

8°: [4], [1]-230, [2] p., plan.

VERY RARE. Published anonymously, but attributed to Blank. This is a catalog of the large collection of natural history objects (minerals, plants, animals) and other items such as drawings, porcelains and other art objects housed at the Franciscan monastery at Würzburg (later to become part of the University of Würzburg collections?).

REFERENCES: BL: [no copy listed]. • BMC: 1, ??, • GV (1700-1910): 16, 339. • Jonathan Hill, Bookseller: cat. 39, no. 21. • Murray, *Museums*, 1904: 3, 284. • NUC: [no copy listed].

610. — German, 1802.

Kurzer Bericht über die Vermehrung und dermalige Einrichtung des Blankischen Naturalien-Cabinetes zu Würzburg, ... Würzburg, F.X. Rienner, 1802.

8°: [i]-xvi, [1]-119, [1] p.

RARE. A short account of Blank's personal natural history cabinet, which contained animals, minerals, birds, books, etc., together with a history of how the collection was brought together. Ultimately, his entire collection was acquired by the University of Würzburg.

REFERENCES: BL: [973.c.16.]. • Jonathan Hill, Bookseller: cat. 39, no. 21.

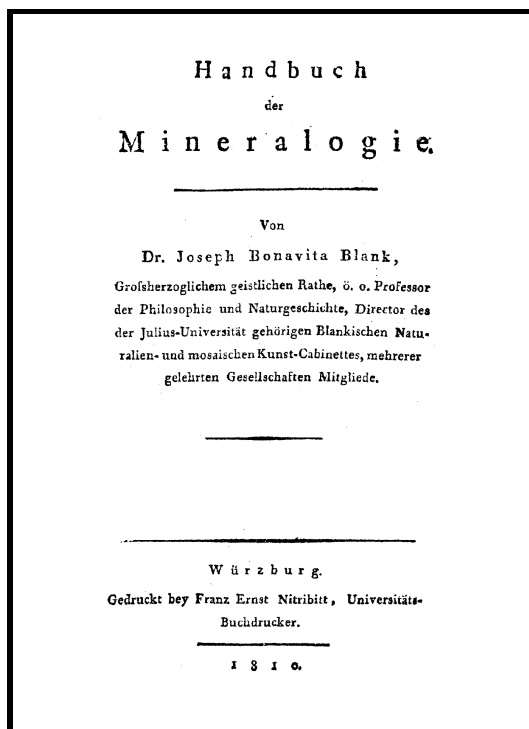
611. — German, 1810.

Handbuch | der | Mineralogie. | [rule] | Von | Dr. Joseph Bonavita Blank, | [...5 lines of titles and memberships...] | [tapered rule] | [tapered rule] | Würzburg. | Gedruckt bey Franz Ernst Nitribitt, Universitäts- | Buchdrucker. | [rule] | 1810.

8°: π^2 1-37⁸ 38³; 301 ℓ .; [4], [1]-596, [2] p. PAGE SIZE: 192 x 105 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede."—dated 21 April 1810.; [1]-596, Text.; [2 pgs], "Verzeichniss | der sinnstörenden Druckfehler."

VERY SCARCE. The author's complete introduction to mineralogy based upon the theories of Werner. It was intended to accompany Blank's lectures at the University of Würzburg, however a contemporary review of this work, states: "This work intended as an introduction to the author's lectures, has many defects.



HANDBUCH DER MINERALOGIE, 1810

For example, the author has often created mistakes in completeness by struggling to keep the the mineral descriptions brief. He also appears to have only a limited knowledge of so-called 'new discoveries,' and the discussion of the various external characters is not ordered logically."

REFERENCES: BL: • GV (1700-1910): 16, 339. • Leonard's *Taschenbuch*: 6, 309-10. • LKG: XII 185. • NUC: [no copy listed].

612. — German, 1810.

Uebersicht | des | Blankischen jetzt der großherzogl. Universität | zu Würzburg gehörigen | Naturalien= und mosaichen | Kunst=Cabinetes, | nebst vorausgeschichter | Nachricht von den Lebensumständen seines | ehemaligen Eigenthümers und jetzigen | Direktors, des Herrn | Joseph Bonavita Blank, | [...2 lines of titles and memberships...] | [tapered rule] | Mit dem Bildnisse des Hrn. Direktors. | [tapered rule] | Bamberg und Würzburg, | bey Joseph Anton Goebhardt 1810.

8°: [1]-80 p., frontispiece (portrait of Blank).

VERY SCARCE. Blank describes in this catalog the large mineral collection he accumulated during his life, and which was acquired by the University of Würzburg in 1803 through part gift and part sale. The volume lists 11,395 specimens in the oryktognostische portion, 2144 examples in the geognostic, and a further 2882 petrifications. The frontispiece portrait shows Blank.

REFERENCES: BL: [B.448.(3.)]. • GV (1700-1910): 16,

BLONDEAU

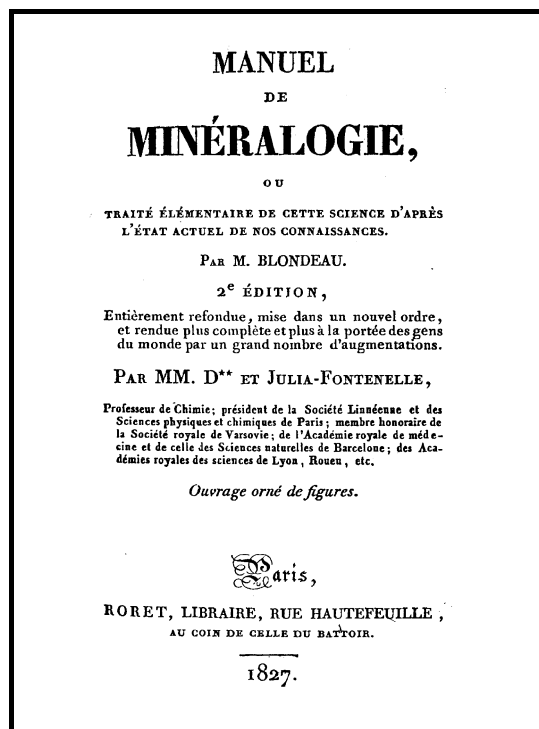
339. • Leonard's *Taschenbuch*: 5, 338-39. • LKG: XV 51. • NUC: [no copy listed].

613. 2nd edition, 1820: Joseph Bonavita Blank's Beschreibung seiner Musivgemälde. Nebst kurzer Nachricht von dem Kunstsale und einigen Zuwüchsen des Naturalien-Kabinetts ... Joseph Bonavita Blank ... Zweite, verbesserte und vermehrte Ausgabe. Würzburg, 1820

8°: xx, 268, [2] p., engraved frontispiece, one folding engraved plate.

RARE. REWORK COMMENTARY: Prepared by Franz Georg Benkert, this description of Blank's collection of paintings also contains supplementary material concerning his natural history cabinet.

The present work describes 61 landscape pictures (including a few portraits) and 133 bird pictures. In the introduction Blank gives a vivid account of his working methods and of a mammoth archive of naturalia collected on his travels and acquired from across the world, which he used in his work. None of Blanks work has endured the ravages of time and the only survivor in the Würzburg collection is a portrait of King Max I Joseph of Bavaria, executed by Blanks assistant Barbara Thein, and by a curious coincidence the frontispiece of the present catalogue. A first description of Blanks artistic output was published in 1796, the present edition is enlarged. Blanks Naturgemälde were displayed in the natural history cabinet of Würzburg University (whose curator Blank was and a description of which is appended). According to Thieme/Becker his work was a Europe wide attraction at the beginning of the 19th century.



MANUEL DE MINÉRALOGIE, 1827

BLONDEAU, Charles Félix. *French mineralogist.*

614. — French, 1827 [2nd edition].

Manuel | De | Minéralogie, | Ou | Traité Élémentaire De Cette Science D'Après | L'État Actuel De Nos Connaissances. | Par M. Blondeau. | 2^e Édition, | Entièrement refondue, mise dans un nouvel ordre, | et rendue plus complète et plus à la portée des gens | du monde par un grand nombre d'augmentations. | Par MM. D** et Julia-Fontenelle, | [...5 lines of titles and memberships...] | Ouvrage orné de figures. | Paris, | Roret, Libraire, Rue Hautefeuille, | Au Coin De Celle Du Battoir. | [rule] | 1827.

12°: π^2 1-38⁶ 392; 232 ℓ .; 1-2, [2], [1]-460 p., one folding table (p. 53, "Table | Des Principales Propriétés Physiques | Des Substances Métalliques"), one folding plate (p. 446, showing apparatus and crystal drawings). PAGE SIZE: 135 x 85 mm.

CONTENTS: 1-2, "... Collection De Manuels | Formant Une | Encyclopédie | Des | Sciences Et Des Arts, | ..."; [2 pgs], Title page, verso "Imprimerie De Marchand Du Breuil, | ..."; [1]-6, "Introduction."; [7]-426, "... Notions Préliminaires."; [427]-446, "Vocabulaire | De | Minéralogie."; [447]-460, "Table Des Matières."

SCARCE. Although called a second edition on the title page, this appears to be the first appearance of the text in print. It is revised by A.G. Desmarest [1784-1838] and the chemist Jean Sebastian Julia de Fontenelle [1790-1842], and was a popular textbook in its day delivering a standard approach to the study of mineralogy. The text covers basic definitions, crystallography, fracture, luster, hardness, color, optics, transparency, chemical composition, nomenclature, and mineral classification. A long section at the end provides a descriptive mineralogy.

According to the advertisement: "Entirely recast in a new order, and made more complete by a large number of augmentations."

REFERENCES: BL: [07108.de.20]. • NUC.

615. 3rd edition, 1831: Manuel | De | Minéralogie, | Ou | Traité Élémentaire De Cette Science D'Après | L'État Actuel De Nos Connaissances. | Par M. Blondeau. | 3^e Édition, | Entièrement Refondue, Mise Dans Un Nouvel Ordre, Et | Rendue Plus Complète Et Plus A La Portée Des Gens Du | Monde Par Un Grand Nombre D'Augmentations. | Par MM. D** et Julia de Fontenelle, | [...6 lines of titles and memberships...] | Ouvrage orné de figures. | Paris, | A La Librairie Encyclopédique De Roret, | Rue Hautefeuille, Au Coin De Celle Du Battoir. | [short rule] | 1831.

12°: [4], 448 p, folding table, 2 plates (one hand-colored).

SCARCE. Revised by A.G. Desmarest and the Chemist Jean Sabastian Julian de Fontenelle [1790-1842].

616. 4th edition, 1837: Manuel | De | Minéralogie, | Ou | Traité Élémentaire De Cette Science D'Après L'État | Actuel De Nos Connaissances, | Par M. Blondeau. | 4^{me} Édition, | Entièrement Refondue, Mise Dans Un Nouvel Ordre, Et Rendue Plus | Complète Et Plus A La Portée Des Gens Du Monde Par Un Grand | Nombre D'Augmentations. | Par MM. D** et Julia de Fontenelle, | [...7 lines of titles and memberships...] | Ouvrage orné de figures. | Bruxelles, | Société Belge De Librairie, Etc. | Hauman, Cattoir Et Compagnie. | [short rule] | 1837.

16°: [4], [1]-443, [1] p., two folding plates (one

colored). PAGE SIZE: 165 x 105 mm. uncut.

CONTENTS: [2 pgs], Half title page, "Manuel | De | Minéralogie," verso "Imprimerie De Judenne, | ..."; [2 pgs], Title page, verso blank.; [1]-6, "Introduction."; [7]-407, Text.; [408]-425, "Vocabulaire | De | Minéralogie."; [426]-443, "Table Des Matières."; [1 pg], Blank.; [At end], 2 folding plates.

SCARCE. Revised by A.G. Desmarest and the chemist Jean Sabastian Julia de Fontenelle [1790-1840].

REFERENCES: BL: [726.b.6.]. • BMC: 1, 177.

Spanish editions

617. Spanish transl., 1831: Manual de Mineralogia, Escrito en Francés por ..., y refundido por los Sres. D.***, y Julia Fontenelle en su segunda edicion, traducido al castellano por D. Manuel Gonzalez Vara. Madrid: Imp. de Repullés, 1831.

8°: xvi, 572 p.

RARE. Translation by Manuel Gonzalez Vara of *Manuel de Minéralogie* (3rd ed., Paris, 1831). Maffei (1871-2) also lists a translation with the same title thought to have been published in 1821; however, Maffei believed this earlier edition was likely a ghost.

REFERENCES: Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, no. 257 & 257b.

El Reino Mineral, ó sea la Mineralogia en general y en particular de España. Obra en que se describen todos los minerales, piedras preciosas, y cuantas curiosidades eucierra la naturaleza ... Traducido del Francés y recopilado de las mejores y más selectas obras Españolas por Don Santiago de Alvarado y de Peña ... (Madrid, 1832).

See: Alvarado Y De La Peña, Santiago.

618. — French, 1821? [First edition].

Manuel de Minéralogie, ou Histoire Naturelle des Minéraux. Par M. Blondeau. Paris, 1821?

12°.

EXTREMELY RARE. No copy of this edition has been traced.



BLUM

BLUM, Johann Reinhard. (BORN: Hanau, Germany, 28 October 1802; DIED: Heidelberg, Germany, 22 August 1883) *German mineralogist.*

Blum was professor of mineralogy at the University of Heidelberg becoming professor emeritus in 1877. He was

also for many years the director of the University's mineral collection.

REFERENCES: ADB: 47, 22. • *American Journal of Science*: 3rd Series, 126 (1883), 332. • Barr, *Index to Biographical Fragments*, 1973: 26. • DBA: I 109, 430-433; II 137, 176-178. • Johannsen, *Descriptive Petrography*, 1939: 4, 100, portrait. • *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*: Jg. 1883, 2, 1-8. • Poggendorff: 1, col. 214 & 3, 145-6. • Sarjeant, *Geologists*, 1980: 2, 572. • WBI.

619. — German, 1828.

Die | Schmuck-Steine | Und Derfn [|] | Bearbeitung. | [double rule] Inaugural-Abhandlung | von | Dr. J. Reinhard Blum, | [...2 lines of titles and memberships...] | [double rule] Heidelberg, | Bei J.C.B. Mohr. | [rule] | 1828.

8°: [1]-72 p., 4 plates. PAGE SIZE: 214 x 130 mm.

RARE. The author's first important work showing a careful analysis of the lapidary knowledge of his time much of it gathered through personal experience after researching the topic for several years. The history of the gemstones Blum describes is given together with numerous footnote citations. He includes descriptions of the apparatus used to fashion the rough into sparkling gems.

REFERENCES: BMC: 2, 178. • Sinkankas, *Gemology Bibliography*, 1993: no. 713.

620. — German, 1832 [First edition].

Taschenbuch | der | Edelsteinkunde | für | Mineralogen, | Techniker, Künstler und Liebhaber | der Edelsteine; | bearbeitet | von | Dr. J. Reinhard Blum. | [... 5 lines of titles and memberships ...] | [tapered rule] Stuttgart, | bei Carl Hoffmann. | 1832.

8°: xvi, 356 p., 6 lithographic plates (folding).

VERY SCARCE. Using his *Die Schmuck-Steine und deren Bearbeitung* (Heidelberg, 1828) as a foundation, Blum wrote this popular pocketbook of gemstones from a mineralogical standpoint. Taking advantage of recent discoveries in optical properties and other physical properties those mineral species that are deemed to be gemstones are fully and described. The first section of the book provides an overview of the properties and the determinative tests used to identify gemstones. Blum then gives a discussion of the lapidary art. The remainder and largest section of the book describes individual gemstone mineral species, giving synonyms, properties, occurrences, methods of lapidary treatment, etc. Blum's work was popular with three editions appearing.

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 714.

621. 2nd edition, 1834: Taschenbuch | der | Edelsteinkunde | für | Mineralogen, | Techniker, Künstler und Liebhaber | der Edelsteine; | bearbeitet | von | Dr. J. Reinhard Blum. | [... 5 lines of titles and memberships ...] | Zweite Auflage. | [rule] Stuttgart, | Julius Weise. | 1834.

8°: xvi, 356 p., 6 lithographic plates (folding). Essentially a reprint of the first edition. VERY SCARCE.

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 715.

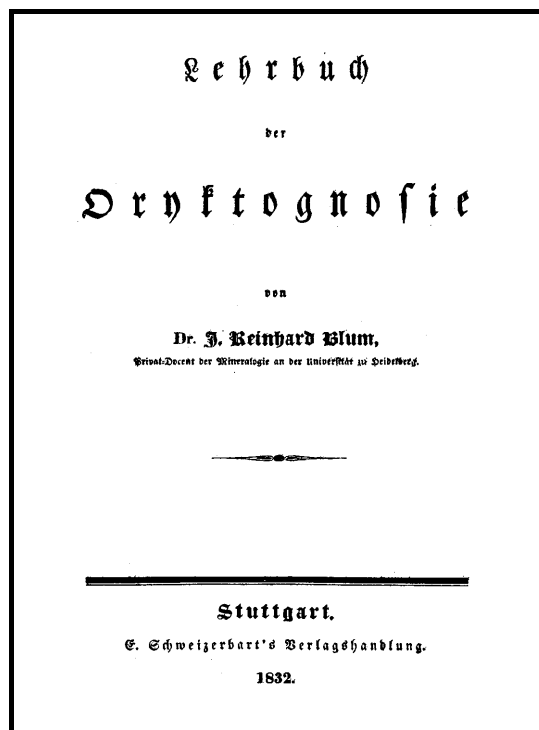
622. — German, 1887 [3rd edition].

Taschenbuch | der | Edelsteinkunde | für | Mineralogen, Techniker und Juweliere | bearbeitet | von | Dr. J. Reinhard Blum, | [...2 lines of titles and memberships...] | Dritte verbesserte Auflage. | [ornament] | Mit in den Text gedruckten Holzschnitten und sechs Steindrucktafeln. | [ornate rule] | Leipzig, | Verlagsbuchhandlung von Carl Wilferodt. | 1887.

8°: x, 341 p., 6 plates.

VERY SCARCE. A revised edition, containing information on the crystallography, physical, optical and chemical properties of gemstones. As in the earlier editions, Blum includes information on gemstone history, occurrences, nomenclature, lapidary treatment, etc., but now also includes notes on gemstone synthesis, imitation stones and inclusions. Sinkankas notes that this book was succeeded by Wilhelm Rau's *Edelsteinkunde* (1st ed., Leipzig, 1907; 6th ed., Leipzig, 1937).

REFERENCES: BMC: 2, 178 [wanting]. • Sinkankas, *Gemology Bibliography*, 1993: no. 716.



LEHRBUCH, 1832

623. — German, 1832 [First edition, issue A].

Lehrbuch | der | Oryktognosie | von | Dr. J. Reinhard Blum, | Privat-Docent der Mineralogie an der Universität zu Heidelberg. | [ornate rule]

| [double rule] | Stuttgart. | E. Schweizerbart's Verlagshandlung. | 1832.

8°: [1]-486, [2] p. Published as volume two of the series, *Naturgeschichte der drei Reiche* by G.W. Bischoff & others. PAGE SIZE: 208 x 128 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-[4], "Vorwort," signed R. Blum, August 1833.; [5]-464, Text.; [465]-468, "Uebersicht | der | Mineralien nach ihren Kernformen."; [469]-486, "Inhalt."; [2 pgs], Publisher's list.

VERY SCARCE. This is the first appearance of Blum's popular textbook of mineralogy, which would go through four editions to 1874. Typical information about mineralogical subjects is covered in a well written style, that no doubt helped to introduce a complex subject to many students. Although some theoretical material is covered, Blum concentrates on the practical aspects of the science, deriving his text from Kobell's *Charakteristik der Mineralien*, Naumann's *Mineralogie* and Leonhard's *Oryktognosie*. For more detailed information, Blum refers the reader to one of the more advanced textbooks.

REFERENCES: BMC: 2, 178.

624. First edition, issue B, 1833: Lehrbuch | der | Oryktognosie | von | Dr. J. Reinhard Blum, | Privat=Docent der Mineralogie an der Universität zu Heidelberg. | [ornate rule] | [double rule] | Stuttgart. | E. Schweizerbart's Verlagshandlung. | 1833.

[SERIES TITLE PAGE READS:]

Naturgeschichte | der | drei Reiche. | Zur | allgemeinen Belehrung | bearbeitet | von | G.W. Bischoff, J.R. Blum, H.S. Bronn, K.C. v. Leonhard, F.S. Leuckart und F.S. Voigt. | [rule] | Mit Abbildungen. | [rule] | Zweiter Band. | Oryktognosie. | [double rule] | Stuttgart. | E. Schweizerbart's Verlagshandlung. | 1833.

8°: [2], 509 p., text illus.

CONTENTS: [2 pgs], Blank, verso series title page.; [1-2], Title page, verso blank.; [3]-[4], "Vorwort," signed R. Blum, August 1833.; [5]-464, Text.; [465]-468, "Uebersicht | der | Mineralien nach ihren Kernformen."; [469]-486, "Inhalt."; [487]-509, "Alphabetisches Register."; [1 pg], Blank.; [2 pgs], Publisher's list.

VERY SCARCE. Identical to the 1832 issue, but with a new year on the title page and the addition of an alphabetical index appended at the end.

REFERENCES: BMC: 2, 178. • Dana's 7th (Bibliography): 66.

625. 2nd edition, 1845: Lehrbuch | der | Oryktognosie | von | Dr. J. Reinhard Blum, | außerordentlicher Professor an der Universität zu Heidelberg und mehrerer gelehrten | Gesellschaften Mitglieder. | Mit 300 krystallographischen Figuren. | Zweite, vermehrte und verbesserte Auflage. | Stuttgart. | E. Schweizerbart'sche Verlagshandlung. | 1845.

8°: xxii, 706 p., 300 illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 66.

626. 3rd edition, 1854: Lehrbuch | der | Oryktognosie | von | Dr. J. Reinhard Blum, | Professor in Heidelberg. | Mit 333 krystallographischen Figuren. | [rule] | Dritte, vermehrte und verbesserte Auflage. | [rule] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung und Druckerei. | 1854.

8°: [i]-xviii, [1]-673, [1] p. PAGE SIZE: 214 x 136 mm. VERY SCARCE.

CONTENTS: [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-vii, "Vorwort zur ersten Auflage (-Vorwort zur dritten Auflage)."; [viii], Blank.; [ix]-xviii, "Inhalt."; [1]-644, Text.; [645]-650, "Uebersicht |

der | Mineralien nach ihren Grundgefallen.”; [651]-673, “Alphabetisches Register.”; [1 pg], “Verbesserungen.”

REFERENCES: Dana's 7th (Bibliography): 66. • Roller & Goodman, *Catalogue*, 1976: 1, 124.

627. 4th edition, 1874: Lehrbuch | der | Mineralogie | (Oryktognosie) | | von | Dr. J. Reinhard Blum, | Hofrath und Professor in Heidelberg. | Mit 457 krystallographischen Figuren. | [rule] | Vierte verbesserte und vermehrte Auflage. | [ornate rule] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung (E. Koch). | 1874.

8°: [i]-xv, [1], [1]-642, [2] p., 457 text illus. PAGE SIZE: 220 x 140 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, “Vorwort zur ersten [-vierten] Auflage.”; [vii]-xv, “Inhalt.”; [1 pg], Blank.; [1]-624, Text.; [625]-629, “Uebersicht | der wichtigsten Mineralien nach den Systemen, in welchen sie | Krystallisiren.”; [630]-642, “Alphabetisches Register.”; [1 pg], “Druckfehler und Verbesserungen.”; [1 pg], Blank.

VERY SCARCE. Another edition of *Lehrbuch der Oryktognosie* with a slightly different title.

REFERENCES: NUC.

628. — German, 1840.

Lithurgik | oder | Mineralien und Felsarten | nach ihrer | Anwendung in ökonomischer, artifizischer und technischer | Hinsicht systematisch abgehandelt | von | Dr. J. Reinhard Blum, | [... 6 lines of titles and memberships ...] | [rule] | Mit 53 in den Text eingedruckten Figuren und 3 Stahlstichen. | [ornate rule] | Stuttgart. | E. Schweizerbart's Verlagshandlung. | 1840.

8°: [i]-vi, [1]-501, [1] p., 3 folding plates, 53 text illus.

CONTENTS: [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-vi, “Vorwort.”—signed R. Blum, December 1839.; [1]-464, Text.; [465]-479, “Inhalt.”; [480], “Verbesserungen.”; [481]-501, “Alphabetisches Register.”; [1 pg], Blank.; [At end], 3 plates.

VERY SCARCE. A detailed economic mineralogy which covers the use of minerals and mineral products in the arts and manufacture are treated. Included is much technical information on drilling blasting, quarrying, mining, gem cutting, pigment preparation, refining, etc. There is a section on ornamental and precious stones that figures famous diamonds. Bibliographical references are included at the end of each major section.

The plates consist of I. Strossenbau/ Firstenbau. II. Architectural columns. III. Egyptian obelisks.

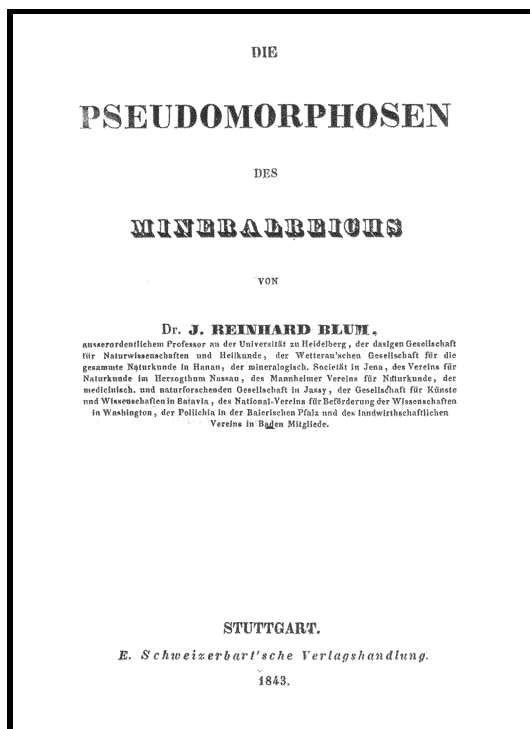
REFERENCES: BMC: 2, 178. • Sinkankas, *Gemology Bibliography*, 1993: no. 717.

629. — German, 1843.

Die | Pseudomorphosen | des | Mineralreichs | von Dr. J. Reinhard Blum. | [...8 lines of titles and memberships...] | [rule] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung. | 1843.

8°: [i]-x, [1]-378 p. PAGE SIZE: 200 x 120 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, “Vorwort”—signed R. Blum, March 1843.; [v]-x, “Inhalt.”; [1]-11, “Einleitung.”; [12]-219, “Erste Abteilung. | Umwandlungs-Pseudomorphosen.”; [220]-319, “Zweite Abteilung. | Verdrängungs-Pseudomorphosen.”; 320-331, “I. Umwandlungs-Pseudomorphosen.”; 332-339, “II. Verdrängungs-Pseudomorphosen.”; 340-374, “Rückblick.”; [375]-377, “Register.”; 378, “Verbesserungen.”



PSEUDOMORPHOSEN DES MINERALREICHES, 1843

RARE. The classic, fundamental work on pseudomorphs that has never been surpassed. The book begins with a review of previous research, discussion of the same, and the author's reasons for dividing pseudomorphs into the two broad classes of alteration pseudos and replacement pseudos. In detailed descriptions of 263 known pseudomorphs, Blum provides a thorough discussion of previous research, rich references, and locality information. Through this work, Blum was among the first to show the importance of chemistry in several pseudomorphic processes, especially in the replacement process, which was later shown to be one of the principle processes involved in forming economic ore deposits. This basic text was maintained and heavily augmented over the next 36 years by four additional supplements. See below for their descriptions.

REFERENCES: *American Journal of Science*: 48 (1845), no. 1, 66-80 [by J.D. Dana]. • BMC: 2, 178. • Dana's 7th (Bibliography): 66. • Fischer, *Gesteins- und Lagerstättenbildung*, 1961: 231-2. • Hazen & Hazen, *American Geological Literature*, 1980: nos. 1737, 1738 & 2816. • Kobell, *Geschichte der Mineralogie*, 1864: 292-3. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 124.

630. Supplement 1, 1847: Nachtrag | Zu Den | Pseudomorphosen | Des | Mineralreichs | Nebst Einem Anhang | Über Die | Versteinerungs- Und Verzerrungs-Mittel | Organischer Körper | Von | Dr. J. Reinhard Blum, | [...2 lines of titles and memberships...] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung. | 1847.

8°: [i]-viii, [1]-213, [1] p. PAGE SIZE: 200 x 120 mm. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-

BLUM

iv, "Vorwort."—signed J.R. Blum, April 1847.; [v]-viii, "Inhalt.;" [1]-151, Text.; [152]-213, "Anhang." | Die organischen Formen im Mineralreiche oder | die Versteinerungs- und Verzugs-Mittel von | organischen Körpern.; [1 pg], Advertisements of other mineralogical books.

REFERENCES: NUC.

631. Supplement 2, 1852: Zweiter Nachtrag | zu den | Pseudomorphosen | des | Mineralreichs. | Von | Dr. J. Reinhard Blum, | Professor in Heidelberg. | [ornament] | Heidelberg. | Druck und Verlag von Julius Groos. | 1852.

8°: [i]-xii, [1]-140 p. PAGE SIZE: 200 x 120 mm. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Vorwort."—signed J.R. Blum, July 1852.; [v]-xii, "Inhalt.;" [1]-140, Text.

REFERENCES: NUC.

632. Supplement 3, 1863: Dritter Nachtrag | zu den | Pseudomorphosen | des | Mineralreichs. | Von | Dr. J. Reinhard Blum. | [ornate rule] | Erlangen. | Verlag von Ferdinand Enke. | 1863.

8°: [i]-xiv, [1]-294 p. PAGE SIZE: 200 x 120 mm. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso "Druck der A.E. Junge'schen Universitäts-Buchdruckerei (E.Th. Jacob)."; [iii]-iv, "Vorwort."—signed J.R. Blum, March 1863.; [v]-xiv, "Inhalt.;" [1]-288, Text.; [289]-294, "Register."

REFERENCES: NUC.

633. Supplement 4, 1879: Die | Pseudomorphosen | Des | Mineralreichs. | [rule] | Vierter Nachtrag. | [rule] | Von | Dr. J. Reinhard Blum. | [ornate rule] | Heidelberg. | Carl Winter's Universitätsbuchhandlung. | 1879.

8°: [i]-xx, [1]-212 p. PAGE SIZE: 200 x 120 mm.

CONTENTS: [i-ii], Half title page, "Die | Pseudomorphosen Des Mineralreichs. | [rule] | Vierter Nachtrag.;" [iii-iv], Title page, verso "Alle Rechte vorbehalten.;" [v], Dedication to Leopold von Buch, signed J.R. Blum.; [vi], Blank.; [vii-viii], "Vorwort.;" ix-xx, "Inhalt.;" [1]-200, Text.; 201-207, "Rückblick.;" 208-212, "Register."

VERY SCARCE. The fourth and final supplement to this famous work. As in the previous supplements, pseudomorphs from alteration, replacement, paramorphs, as well as ore deposits are described. All the research is thoroughly referenced. At the conclusion of this last supplement is a review of the importance of this book in the history of mineral and geology.

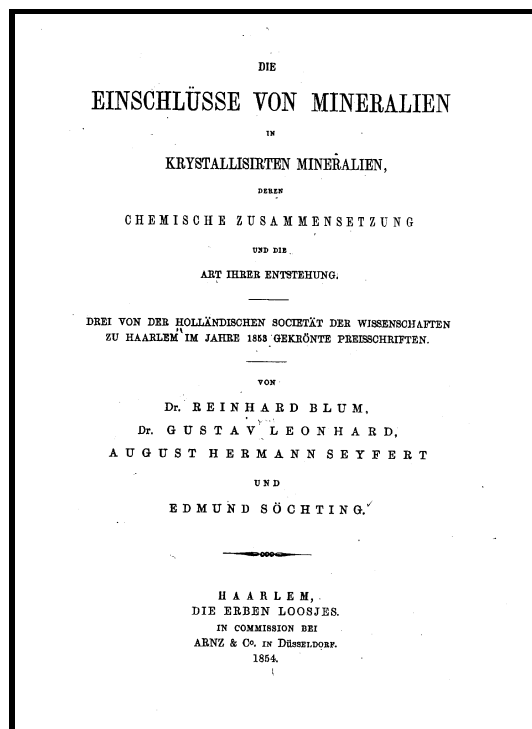
REFERENCES: NUC. • USGS Library Catalog.

634. — German, 1854.

Die | Einschlüsse Von Mineralien | In | Krystallisirten Mineralien, | Deren | Chemische Zusammensetzung | Und Die | Art Ihrer Entstehung. | [rule] | Drei Von Der Holländischen Societät Der Wissenschaften | Zu Haarlem Im Jahre 1853 Gekrönte Preisschriften. | [rule] | Von | Dr. Reinhard Blum, | Dr. Gustav Leonhard, | August Hermann Seyfert | Und | Edmund Söchting. | [ornate rule] | Haarlem, | Die Erben Loosjes. | In Commission Bei | Arnz & Co. in Düsseldorf. | 1854.

4°: [8], 264 p., 8 plates (7 color). PAGE SIZE: 294 x 230 mm.

VERY SCARCE. Co-authored with Gustav Leonhard, August Hermann Seyfert and Edmund Söchting, this is a voluminous compendium of prize winning essays about inclusions found in minerals. A total of 334 types of inclusion-host pairs are



EINSCHLÜSSE VON MINERALIEN, 1854

recorded, and many old references to inclusions in minerals are cited (pp. 73-75, 141-150). Söchting summarized the prior work of Blum, Leonhard, and Bischof on the occurrence of minerals included in other minerals. Söchting also lists a number of minerals that have been found in quartz. Occurrences of asphalt, petroleum, and water in quartz are mentioned. He shows that the presence of inclusions with low melting or decomposition temperatures can be used to prove that the quartz in many cases could not have been deposited from molten condition. Also discussed are the occurrence of broken tourmaline needles in quartz.

REFERENCES: BMC: 2, 178. • Sinkankas, *Gemology Bibliography*, 1993: no. 718A.

635. — German, 1850.

Grundzüge der Mineralogie und Geognosie. Stuttgart, 1850.

8°: iv, 162 p.

VERY SCARCE. Forming volume 3 of *Neue Encyklop. Wissenschaft. & Kunst.* [?].

REFERENCES: BMC: 2, 178.

636. — German, 1860.

Handbuch | der | Lithologie oder Gesteinlehre | von | Dr. J. Reinhard Blum, | [...2 lines of titles and memberships...] | Mit 50 Figuren. | [rule] | Erlangen. | Verlag von Ferdinand Enke. | 1860.

8°: [i]-xii, [1]-356 p., illus.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Vorwort."—signed J.R. Blum, March 1860.; [iv], Blank.;

[v]-xii, "Inhalt.;" [1]-346, Text.; [347]-356, "Register."

VERY SCARCE. Handbook of lithology describing various rocks.

REFERENCES: BMC: 2, 178. • *Katalog Bergakademie Freiberg*, 1879: p. 76.

637. — German, 1866.

Die Mineralien | nach | Den Krystallsystemen geordnet. | [rule] | Ein Leitfaden | zum Bestimmen derselben | vermittelt ihrer | Krystallographischen Eigenschaften | von | J. Reinhard Blum. | [ornate rule] | Leipzig und Heidelberg. | C.F. Winter'sche Verlagshandlung. 1866.

8°: [i]-vi, [2], [1]-32 p. Printed wraps. PAGE SIZE: 230 x 150 mm. uncut.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Vorwort.;" [1 pg], "Die Mineralien nach den Krystallsystemen geordnet.;" [1 pg], Blank.; [1]-28, Text.; [29]-32, "Register."

RARE. An attempt to classify minerals according to their crystal system, which is also used in the identification of the mineral species.

REFERENCES: BMC: 2, 178.

638. — German, 1869 [Collection catalog].

Die Mineralien-Cabinet der Universität des Heidelberg. Heidelberg, 1869.

8°: [6], [1]-40 p., map (plan of museum).

RARE. Descriptive catalog of the University of Heidelberg's mineral collection, of which Blum was the curator.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 124.



BLUMENBACH

BLUMENBACH, Johann Friedrich. (BORN: Gotha, Germany, 11 May 1752; DIED: Göttingen, Germany, 22 January 1840) *German physician, biologist & naturalist.*

Blumenbach studied medicine at Jena and Göttingen, from which he received his M.D. in 1775. He was

appointed professor ordinary of medicine and anatomy at the University of Göttingen in 1778, where he had a 50 year career. Considered one of the founders of modern anthropology, Blumenbach was the first to divide the human species into five races, i.e., Caucasian, Mongolian, Malay, American and African or Ethiopian. Blumenbach was a member of about seventy learned societies. He was made a knight of the Guelphic order in 1821.

REFERENCES: ADB: 2, 748. • Barr, *Index to Biographical Fragments*, 1973: 26. • *Catalogue of Portraits of Naturalists*: 192 [9 portraits listed]. • Cleevely, *World Palaeontological Collections*, 1983: 60. • DBA: I 110, 256-282; 1425, 202-212; II 138, 33; 138, 35-46. • Drugulin, *Sechstausend Portraits*, 1863: nos. 469-87 & 6057. • DSB: 2, 203-5 [by W. Baron]. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, ?? . • ISIS, 1913-65: 1, 159. • Lambrecht & Quenstedt, *Catalogus*, 1938: 44. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 495-6. • NDB: 2, 329-30 [by A. Kleinschmidt]. • Poggendorff: 1, col. 214. • Sarjeant, *Geologists*, 1980: 2, 572-3, Suppl. 1 (1985), 1, 296 & Suppl. 2 (1996), 1, 446-7. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • Spencer, F., "Johann Friedrich Blumenbach," in: *History of Physical Anthropology and Encyclopedia*, 1 (1997), 183-9. • Thomas, *Dictionary of Biography*, 1884: 373. • Wagenitz, *Göttinger Biologen*, 1988: 29-30. • WBI.

639. — German, 1779 [First edition].

D. Joh. Friedr. Blumenbachs d[e]r Med. Prof. ord. zu Göttingen Handbuch der Naturgeschichte ... Göttingen, J. C. Dieterich, 1779-80.

2 vols. bound in one. 8°: [14], [1]-559, [27] p., 2 plates (folding).

VERY SCARCE. A once very popular, much printed, ambitious and comprehensive work on natural history, covering all aspects including the kingdom of minerals.

Von den Säugethieren, Vögeln, Amphibien, Fischen, Insekten, Würmern, Pflanzen, Mineralien, Metallen, Versteinerungen etc. - Die Taf. mit Abb. der verschiedenen Würmer im menschlichen Körper in Orig.-Größe, der Blattrinde der Pirnblätter und merkwürdigen Kristallisationen der Mineralien.

In his other work, *Handbuch der Naturgeschichte* (1779), he presented a compelling argument that zoological classifications should and could be based on structures associated with an animals specific functions. With his approach, he made an important contribution to the development of comparative primate anatomy. He noted that humans possessed a unique suite of anatomical characteristics that proved they were exclusively designed stand and walk upright (Spencer 185). Blumenbach began to separate human beings from apes, suggesting that Homo be assigned to a different and separate zoological order. This technique of separation between humans and apes were widely adopted and continued to the mid-19th century.

Blumenbach view of the nature was a philosophical one; he searched for the causes of things, not satisfying himself with the mere counting and description of phenomena. He approached anthropology with the mind of the natural scientist. He recognised that, in the same way as domestic animals come in varieties, all known groups of mankind originated from one common, basic race, which he divided into five. His activity as a

BLUMENBACH

teacher comprised three fields of natural history: mineralogy, botany, and zoology, the latter being his main discipline.

Blumenbach's *Handbuch der Naturgeschichte* (1779) is the first authored on a anatomical-physiological basis. It went through many editions and was translated into many languages. Although Blumenbach tended to follow the Linnean system, this work ushered in a new era in natural history. It contains an abundance of new or hitherto insufficiently evaluated morphological and ecological findings, from which Blumenbach drew conclusions that led to a more modern concept of the plant and animal kingdoms. He concluded from the spread of certain parasites found only in the domestic pig that such parasites did not exist as long as pigs were not domesticated and that they could therefore not possibly have existed since the creation of the world. Such ideas, revolutionary in their day, were carefully presented in various places in the *Handbuch*, and were demonstrated by concrete examples.

In connection with the morphological analysis and geological dating of fossil plants and animals, Blumenbach developed ideas that were still unknown to most of the scientists of his day and were touched upon by only a few others, such as Soulavie. He came to the conclusion that there had been groups of plants and animals, now extinct, which could not be classified in the system of recent forms of life, and he even attempted to draw up a geological-paleontological time scale.

REFERENCES: LKG: XII 174.

640. 2nd edition, 1782: *Handbuch der Naturgeschichte*. Zweyte durchgehends verbesserte Ausgabe. Göttingen, J. Chr. Dieterich, 1782.

8°: 3 folding engraved tables

VERY SCARCE. Cf. BMC NH, p. 179; Wood, p. 245 (both first edition of 1799); DSB II, pp. 203-205. Second revised and expanded edition of highly influential work on natural history that "ushered in a new era in the advancement of science" (DSB). In this handbook Blumenbach included a wealth of morphological and ecological findings. He stated for instance that parasites found in domestic pigs did not exist as long as pigs were not domesticated, and therefore they could not have existed since the creation of the world. Based on his morphological analysis and geological dating of fossil plants and animals, he said that certain forms of plant and animal life had not only become extinct but also could not be classified in the system of recent forms of life. Blumenbach therefore was one of the earliest thinkers to recognize the "historicalness" of nature (DSB). The *Handbuch der Naturgeschichte* was first published in 1799. It went through numerous editions and was translated into many languages. The three parts of the work, zoology, botany and mineralogy, are each accompanied by a folding engraved plate.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 125.

641. 3rd edition, 1788: *Handbuch der Naturgeschichte* ... Göttingen, J. C. Dieterich, 1788.

8°: [i]-xvi, [1]-715 p., 3 plates (folding). VERY SCARCE.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 125.

642. 4th edition, 1791: *Handbuch der Naturgeschichte* ... Göttingen, J. C. Dieterich, 1791.

8°: [i]-xii, [1]-704, [34] p., 3 plates (folding). VERY SCARCE.

643. 5th edition, 1797: *Handbuch der Naturgeschichte*. 5. Aufl. Göttingen, Dieterich 1797.

8°: XVIII, 714, [32] p., 2 engraved plates. SCARCE.

644. 7th edition, 1803: *Handbuch der Naturgeschichte* ... Göttingen, Dieterich Verlag, 1803.

8°: [i]-xvi, [1]-734 p., 2 plates (engraved, folding). VERY SCARCE.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 125.

645. 8th edition, 1807: *Handbuch | der | Naturgeschichte | von | Joh. Fried. Blumenbach. | Achte Auflage. |* Göttingen, 1807. | Bei Heinrich Dieterich.

8°: [i]-xvi, [1]-743, [41] p., 2 plates (engraved, folding).

CONTENTS: [i-ii], Title page, verso quotation.; iii-xii, "Vorrede."; xiii, "Zusätze."; xiv, "Verbesserungen."; xv-xvi, "Anweisung der Kupftafeln."; [1]-743, Text.; [41 pgs], Index.

SCARCE. The text in XVI chapters consists of 3 introductory chapters on general natural history and sections on the various kingdoms.

REFERENCES: BMC: 1, 179. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 300. • Roller & Goodman, *Catalogue*, 1976: 1, 125. • Wood, *Literature of Vertebrate Zoology*, 1931: 245.

646. 9th edition, 1814: *Handbuch der Naturgeschichte* ... Göttingen, Dieterich, 1814.

8°: xiv, 754 p., 2 plates (folding). VERY SCARCE.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 125.

647. 10th edition, 1821: *Handbuch der Naturgeschichte* ... Göttingen, Dieterich, 1821.

8°: xiv, 813 p., 2 plates (folding). Includes bibliographical references and index. VERY SCARCE.

648. 11th edition, 1825: *Handbuch | der | Naturgeschichte | von | Joh. Fried. Blumenbach. | [ornament] | Eilfte rechtmässige Ausgabe. |* Göttingen, 1825. | In der Dieterich'schen Buchhandlung.

8°: [2], [i]-xi, [1], [1]-668 p., 2 plates (engraved, folding).

VERY SCARCE. A revised edition, with a new forward by Blumenbach and adding primarily to the list of references for each section, rather than the text proper.

REFERENCES: Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 301.

649. 12th edition, 1832: *Handbuch der Naturgeschichte* ... Wien, Lechner, 1832.

8°: [i]-viii, [1]-531 p., 2 plates. VERY SCARCE.

Danish edition

650. First edition, 1793: *Haandbog i Naturhistorien*. Overs. efter den fjerde tydske Udgave af O.J. Mynster. Kbhvn. 1793.

8°: [6], 598, [34] p., 3 folding tables. VERY SCARCE.

REFERENCES: *Bibliotheca Danica*: 2, 163. • LKG: XII 175a*.

Russian edition

651. First edition, 1797: *Rukovodstvo k estestvennoi istorii D. Iog. Fridr. Blumenbakha, Gettingskago Universiteta Professora i Velikobritanskago Nadvornago Sovietnika, perevedennoe s Niemetskago na Rossiiskii iazyk Estestvennoi Istarii uchiteliami Petrom Naumovym i Andreem Teriaevym*. Sanktpeterburg, Pechatano v Privilegirovannoi Tipografii u Vil'kovskago, 1796, c1797.

3 vols. RARE.

Contents: Ch. 1. O estestvennykh tielakh voobshche i chastno o zveriax i ptitsakh. Ch. 2. O zemnovodnykh, rybakh, nasekomykh, cherviakh i o proziabaemykh

tielakh voobshche. Ch. 3. Ob izkopaemykh tielakh i okamenelostiakh.

REFERENCES: *Svodnyi Katalog Russkoĭ Knigi*: no. 610.

French edition

652. First edition, 1803: Manuel de l'Histoire Naturelle Traduit de l'Allemand de Blumenbach sur la 6. Edition ... par Soulange Artaud ... Paris et Metz, Chez Collignon, Imprimeur-Libraire, 1803.

2 vols. Translated from the 6th German edition. VERY SCARCE.

REFERENCES: LKG: XII 175a. • Roller & Goodman, *Catalogue*, 1976: 1, 125.

English edition

653. First edition, 1825: A | Manual | of the | Elements | of | Natural History. | By | I.F. Blumenbach, | [...4 lines of titles and memberships...] | Translated from the tenth German edition, | By R.T. Gore, | Member of the Royal College of Surgeons, in London, &c. | [quotation, 5 lines] | London: | printed for W. Simpkin & R. Marshall, | Stationers'-Hall Court. | 1825.

8°: [12], [1]-415, [1], [i]-xiv p., 2 plates (engraved).

CONTENTS: [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], Dedication by translator.; [2 pgs], Advertisement.; [2 pgs], Extract from author's preface.; [2 pgs], Contents.; [1]-415, Text.; [i]-xiv, Index.

SCARCE. Translation from the tenth German edition by Richard Thomas Gore [1799-1881], with the text in 16 sections.

REFERENCES: Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 302.

654. — German, 1806-11.

Beitrage zur Naturgeschichte von Joh. Fr. Blumenbach. Göttingen, J. C. Dieterich, 1806-11.

2 vols. 8°: Theil 1. Ausgabe 2, 1806. Theil 2. Ausgabe 1, 1811.

VERY SCARCE. Blumenbach's book *Beyträge zur Naturgeschichte* contains several essays on the variability of nature, a concept that was not understood very well. It also showed that the earth, with all its flora and fauna, had a very long history. Blumenbach was one of the earliest thinkers to recognise the historicalness of nature, and therefore occupies an important place in the history of evolution theory.

OkU has lots, Lots, LOTS OF EDITIONS

2 parts. Göttingen, 1790. 1811. English translation, London, 1865.

German, 1790: *Beyträge zur Naturgeschichte von Joh. Fr. Blumenbach...* Erster Theil. Göttingen, Bey Johann Christian Dieterich, 1790. 8°: a⁴ A-G⁸ H-I⁴; 66 leaves.; [i]-viii, [1]-126, [2] p., illus. Includes bibliographical references.

REFERENCES: LKG: VI 101.

655. — German, 1796-1810.

Abbildungen | naturhistorischer Gegenstände | herausgegeben | von | Joh. Fried. Blumenbach. | Ites Heft | Nro 1-10. | Göttingen | Bey Johann Christian Dietrich | 1796.

[REMAINING TITLES NUMBERED AS FOLLOWS:]

... | 2tes Heft. | Nro 11-20. | ... | 1797.

... | 3tes Heft. | Nro 21-30. | ... | 1798.

... | 4tes Heft. | Nro 31-40. | ... | 1799.

... | 5tes Heft. | Nro 41-50. | ... | 1800.

... | 6tes Heft. | Nro 51-60. | ... | 1802.

... | 7tes Heft. | Nro 61-70. | ... | 1804.

... | 8tes Heft. | Nro 71-80. | ... | 1805.

... | 9tes Heft. | Nro 81-90. | ... | 1809.

... | 10tes Heft. | Nro 91-100. | ... | 1810.

10 parts. 8°: 127 leaves, 100 engraved plates (9 hand-colored). PAGE SIZE: 206 x 122 mm.

CONTENTS: Heft 1, leaves: [1], Title page, verso contents.; [1], Preface, dated Göttingen, 7 April 1796.; [2], Description of plates 1-5.; Plates 1-10, each with one leave of descriptive text.; [1], Blank.

Hefts 2-9, each identically arranged, leaves: [1], Title page, verso contents.; text and plates.; [1], Blank.

Heft 10, leaves: [1], Title page, verso contents.; [1], Half title page, "Abbildungen | naturhistorischer Gegenstände," verso blank.; [1], Title page to the set, "Abbildungen | naturhistorischer Gegenstände | herausgegeben | von | Joh. Fried. Blumenbach. | Nro 1-100. | Göttingen | bey Heinrich Dieterich. | 1810," verso blank.; [3], Classified index to all plates.; [1], Contents list for Heft 1.; Text and plates, 91-100.; [1], Blank.

RARE. The ten Hefts described were reissued again in 1810 under a general title. This is an interesting little work pictures all aspects of nature in a series of 100 plates. Although a once popular work, its is today only of interest for its intrinsic and historic value, having made no significant scientific contribution. It contains descriptive text to each of the 100 plates, together with contents lists, that show depictions from the plant, animal and mineral realms of nature. The set title and other preliminary matter bound in Heft 10 were intended for the reader that wanted to have the separate parts bound into a single volume.

REFERENCES: Anker, *Bird Books and Bird Art*, 1938: 46. • LKG: VI 102a. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. 296. • Nissen (ZBI): ZBI 421. • Roller & Goodman, *Catalogue*, 1976: 1, 124. • Wood, *Literature of Vertebrate Zoology*, 1931: 254.

656. Collected edition, 1810: Abbildungen | naturhistorischer Gegenstände | herausgegeben | von | Joh. Fried. Blumenbach. | Nro 1-100. | Göttingen | bey Heinrich Dieterich. | 1810.

8°: 109 leaves, plates 1-100 (10 hand-colored).

CONTENTS: leaves, [1], Half title page, verso blank.; [1], Title page, verso blank.; [3], Classified index to the plates.; [1], Table of contents ("des Isten Hefts"); [1], Preface, dated Göttingen, 24 January 1810.; [2], Discussion of the anthropological plates 1-5; [100], Text, being one descriptive leave for each plate, 1-100.

RARE. The set title and preliminary is identical to that published in Heft 10 of the series; however, Heft 1 has been entirely reset with a revised preface. Due to evidence of wear in the typeset, Mengel believes this issue to have been printed from standing type rather than being bound up from old sheets. Hefts with later issue years are known to exist, indicating that distinctive editions of this work were also published in 1827 and 1830 and perhaps other years.

REFERENCES: Mengel, *Catalogue of the Ellis Collection*, 1972-83: nos. 297-299. • Zimmer, *Ayer Ornithological Library*, 1926: 62.

657. — Latin, 1803.

Io. Frider. Blumenbachii Specimen archaeologiae telluris terrarumque inprimis Hannoveranarum.

BOATE

Goettingae, Apud Henricum Dieterich, 1803.

8°: [1-3], 4-28 p., 3 plates. Plates are unsigned and the impressions measure 13.3 x 17.3 cm. Includes bibliographical references. This book appears to be concerned with paleontology. RARE.

2nd edition, 1816: *Io. Frid. Blumenbachii Specimen archaeologiae telluris terrarumque inprimis Hannoveranarum alterum.* Gottingae, Apud Henricum Dieterich, 1816. [1]-[3], 4-24 p., illus., one plate signed "Priephs. sc.". REFERENCES: LKG: XVII 61.

658. — Latin, 1808.

Specimen historiae naturalis antiquae artis operibus illustratae eaque vicissim illustrantis. Goettingae, Apud Henricum Dieterich, 1808.

8°: 32 p., illus. RARE.

REFERENCES: LKG: VI 102b*.

BLUMHOF, Johann Georg Ludolph. (BORN: Hannover, Germany, 25 September 1774; DIED: Giessen, Germany, 9 May 1825) *German engineer & technologist.*

In 1805, Blumhof was the administrator of the iron works at Silbach. He was appointed in 1809 metal inspector in Ludwigshütte near Biedenkopf in Ober-Hessen. In 1819, he was named professor of technology at the University of Giessen, where he remained. He was an expert in iron production and authored several authoritative works on the subject.

REFERENCES: ADB: • DBA: I 111,3 0-84; II 138, 426-428. • Ferchl. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • NDB: 2, 336 [by H. Dickmann]. • Poggendorff: 1, col. 215. • WBI.

Die spezifischen Gewichte der Körper, aus dem Französisch des Hrn. Brisson. Übersetzt und mit Anmerkung besonders die literatur betreff. von J.G.L. Blumhof. Mit Zusätzen von A.G. Kastner. Leipzig, 1795.

See: Brisson, Mathurin Jacques.

659. — German, 1803.

Völlständige systematische Literatur vom Eisen in mineralogischer, chemischer, technologischer, ökonomischer, cameralistischer und medicinischer Rücksicht. Für Eisenhüttenenkundige, Technologen und Litteratoren herausgegeben von J.G.L. Blumhof ... Braunschweig, Vieweg, 1803.

8°: [i]-xiv, [1]-272 p.

VERY SCARCE. A systematic review of the literature of iron from the standpoint of mineralogists, chemists, technologists, etc.

REFERENCES: Dickmann, H., "Johann Georg Ludolph Blumhof (1771-1825) und seine Bedeutung für die Geschichte des Eisens," *Beiträge Geschichte der Technische Industrie*, 17 (1927), 157-9. • LKG: XVI 251. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 567.

660. — German, 1822.

Lehrbuch der Lithurgik | oder der | angewandten Mineralogie. | Für | Kameralisten, Oekonomen, Technologen, | Metallurgen und Forstmänner. | [rule] | Zum Gebrauch bey Vorlesungen auf Universitäten, Gymnasien und polytechnischen Lehranstalten | herausgegeben | von | Dr. J. George Ludwig Blumhof, | [...3 lines of titles and

memberships...] | [rule] | [rule] | Frankfurt am Main. | Bey Franz Varrentrapp. | 1822.

8°: [i]-xii, [2], [1]-521, [1] p. PAGE SIZE: 220 x 130 mm.

VERY SCARCE. A general economic geology containing short discussions on minerals, rocks, earths, clays, fuels, etc that are used in arts and manufactures. The first section covers the physical and chemical properties of minerals, which is followed by discussions of individual minerals and gemstones. Each mineral type is discussed in relation to its geological occurrences and their economic importance. Unusual for the time, these discussions are well referenced, with included lists of literature pertaining to the individual species.

REFERENCES: NUC: 62, 158. • Sinkankas, *Gemology Bibliography*, 1993: no. 719.

BOATE, Arnold de. (BORN: Gorcum, The Netherlands, 1600?; DIED: Paris, France?, 1653?) *Dutch physician, hebraist & writer.*

See: Platt, Hugh, Sir.

BOATE, Gerard. (BORN: Gorcum, The Netherlands, 1604; DIED: London, England, 1650) *Dutch physician.*

Brother of Arnold Boate. Boate received his M.D. from Leyden in 1628, after which he emigrated to London. He became physician to the king. He wrote in 1641 in conjunction with his brother a treatise depreciatory of the Aristotelian philosophy.

REFERENCES: *Biografisch Woordenboek Nederland*. • DNB. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

661. — English, 1652 [First edition].

[Contained within a single rule box:] Irelands | Natvrall | History. | Being a true and ample Description of | its Situation, Gretness, Shape, and Nature; | Of its Hills, Woods, Heaths, Bogs; Of its Fruit- | full Parts and profitable Grounds, with the severall | way of Manuring and Improving the same: | With its Heads or Promontories, Harbours, | Roades and Bayes; Of its Metalls, Mineralls, Free- | stone, Marble, Sea-coal, Turf, and other things | that are taken out of the ground. | And lastly, of the Nature and temperature | of its Air and Season, and vvhat diseates it is free | from, or subject unto. Conducing to the Advance- | ment of Navigation, Husbandry, and other | profitable Arts and Professions. | [rule] | Written by Gerard Boate, late Doctor of | Physick to the State in Ireland. | And now published | By | Samuel Hartlib, Esq; | For the Common Good of Ireland, and more | especially, for the benefit of the Advenurers | and Planters therein. | [rule] | Imprinted at London for John Wright at the | Kings Head in the Old Bayley. 1652.

8°: A-N⁸; 104ℓ.; [16], [1]-186, [6] p.

CONTENTS: [2 pgs/=A1], Title page, verso blank.; [8 pgs/=A2r-A5v], Dedication to Oliver Cromwel, signed Samuel Hartlib.; [5 pgs/=A6r-A8r], "To the Reader."—signed Arnold Boate, Paris 10/20 August.; [1 pg/=A8v],

Blank.; [1]-186 (=B1r-N5v), Text.; [4 pgs/=N6r-N7v], Contents.; [1 pg/=N8r], "Errata.;" [1 pg/=N8v], Blank.

RARE. Ireland – Description and travel – Early works to 1800.

REFERENCES: BL: [957.c.27]. • LKG: XIV 398.

662. 2nd edition, 1657: [Contained within a single rule box:] Ireland's | Natuall | History. | Being a true and ample Description of | its Situation, Greatness, Shape, and Nature; | Of its Hills, Woods, Heaths, Bogs; Of its Fruit- | full Parts and profitable Grounds, with the severall ways of Manuring and Improving the same: | With its Heads or Promontories, Harbours, | Roads and Bays; Of its Springs and Fountains, | Brooks, Rivers, Loughs; Of its Metalls, Mineralls, Free- | stone, Marble, Sea-coal, Turf, and other things | that are taken out of the ground. | And lastly, of the Nature and temperature | of its Air and Season, an dwhat diseases it is free | from, or subject unto. Conducing to the Advance- | ment of Navigation, Husbandry, and other | profitable Arts and Professions. | [rule] | Written by Gerard Boate, late Doctor of | Physick to the State in Ireland. | And now published by | Samuell Hartlib, Esq; | For the Common Good of Ireland, and more | especially, for the benefit of the Adventurers | and Planters therein. | [rule] | Imprinted at London for John Wright at the | Kings Head in the Old Baily, 1657.

8°: A-N⁸; 104ℓ.; [16], 1-186, [6] p.

CONTENTS: [2 pgs], Title page, verso blank.; [8 pgs], Dedication to Oliver Cromwel.; [5 pgs], "To the Reader.;" [1 pg], Blank.; 1-186, Text.; [4 pgs], Table of contents.; [1 pg], "Errata.;" [1 pg], Blank.

RARE. Natural history – Ireland. Ireland – Description and travel.

REFERENCES: BL: [957.c.28.].

663. French transl., 1666: Histoire naturelle d'Irlande contenant une description très exacte de sa situation, de sa grandeur, de sa figure, de la nature de ses montagnes, de ses forêts, de ses bruyères, de ses marais et de ses terres labourables. Avec le dénombrement de ses caps, de ses havres, de ses rades et de ses baies, de ses fontaines, de ses ruisseaux, de ses rivières et de ses lacs, des métaux et des minéraux, etc. Et enfin de la nature et de la température de son air, et de ses saisons, des maladies dont elle est exempte, et de celles à quoi elle est sujette, le tout donnant de grandes lumières à la navigation, et à l'agriculture. Paris, Niville, 1666.

12°: [8], 334, [4] p. PAGE SIZE: 142 x 84 mm

VERY RARE. Translation by Pierre Briot of *Irelands Natuall History* (1st ed., London, 1652).

REFERENCES: BL: [957.a.32.]. • LKG: XIV 399a.



BOCCONE

BOCCONE, Paolo Sylvius. (BORN: Palermo, Italy, 24 April 1633; DIED: Palermo, Italy, 22 December 1704) *Italian botanist.*

Boccone was a longtime professor of botany at the University of Padua. He traveled widely throughout Europe collecting various natural species and attending scientific meetings. He is best remembered for an important flora of Sicily, *Icones & Descriptiones Rariorum Plantarum Siciliae* (Oxonii, 1674). Boccone was a pioneer in the description of the natural history of the Island of Sicily (particularly plants) and his works show the typical 17th century penchant for curiosities, destined for an imaginary or real Museum. He was a member of the Leopoldina Academy. When he became a Monk he adopted the name Silvius.

REFERENCES: ABI: I 169, 170-204; II 68, 208-210; II S 11, 249. • Accordi, B., "Paolo Boccone (1633-1740)—a practically unknown excellent geo-paleontologist of the 17th Century," *Geologica Romana*, 14 (1975), 353-9, figs. 1-3. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • *Nouvelle Biographie Générale* (Hoefer): 6, 302-3. • Poggendorff: 1, col. 216. • Sarjeant, *Geologists*, 1980: 2, 574. • WBI.

664. — Italian, 1669.

Della Pietra | Belzvar Minerale | Siciliana | Lettera Familiare | Di | D. Paolo Boccone | Panormitano, | Botanico del Serenissimo Gran Duca di | Toscana, scritta ad vn Vir- | tuoso, e | Dedicata | All'Illustrissimo Signor | Don Giacomo Rvffo | Visconte de Francauilla, &c. | Con le Virtù, esperienze, luoghi doue si produce, | fedì de' Medici, modo d'adoperarla, con al- | cune figure in rame, che dimostrano la | forma, e varietà di essa Pietra | Belzuare. | [ornament] | In Monteleone Appresso Domenico Ferro M.DC.LXIX. | Con Licenza de'Superiori.

4°: [4], [1]-30 p., including one nearly full-page engraving (p. 19) and one blank page.

VERY RARE. Printed by Domenico Antonio Ferro, this monograph describes the minerals found in the author's native Sicily, with special attention to their supposed medical applications. In particular, Boccone describes the virtues of the bezoar stone, a petrified secretion of an animal intestine. Boccone gives unusually careful descriptions of the sites where specimens are found, describes their structure and expounds on some medical applications for which he has received endoresements from Sicilian physicians. This work is also an example of a rare Monteleone (di Calabria) imprint (Printing came to Monteleone only in 1635!).

REFERENCES: Fumagalli, *Lexicon Typographicum Italiae*, 1905: p. 245. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 184. • LKG: XVI 304. • Mira: I.111. • NUC: [no copy listed]. • Thorndike, *History of Magic*, 1923-58: 8, 38ff.

Researches et Observations Naturelles

665. — French, 1671 [First edition].

Recherches et observations naturelles sur la production de plusieurs pierres principalement de

BOCCONE

celles qui sont de figure de coquille, & celles qu'on nomme corne d'ammon, sur la petrification de quelques parties d'animaux sur les principes des glossopetres, sur la pierre etoilée, et sur l'embrasement du Mont Gibel ou Etna arrivé en l'an 1669 par Mr. Boccone. A Paris, Chez Claude Barbin ..., 1671.

2 parts. 4°: a⁴ 2a⁸ b-f^{4/8} A-I^{4/8}; ??ℓ.; [8], 69, [4] p.; [4], 112 p., 8 plates. Part 2 has its own title page. VERY RARE.

REFERENCES: Hoover Collection: no. 138.

666. 2nd edition, 1674: Recherches | Et | Observations | Naturelles | De Monsieur Boccone | Gentilhomme Sicilien; | Touchant | Le Corail, la pierre Etoilée, les Pierres de figure de | Coquilles, la Corne d'Ammon, l'Astroït Undula- | tus, les Dents de Poissons pétrifiées, les Herissons | alterez, l'Embrasement du Mont Etna, la Sangsüe | du Xiphias, l'Alcyonium stupposum, le Bezoar Mi- | neral, | les Plantes qu'on trouve dans la Sicile, avec | quelques Reflexions sur la Vegetation des Plantes. | Examinées a diverses fois dans l'Assemblée de Messieurs de la So- | ciete Royale de Londres, & Conférences dans les | de Monsieur l'Abbé Bourdelot a Paris. | [ornament] | A Amsterdam. | [rule] | Chez Jean Jansson à Wasberge l'An 1674.

8°: ★⁴ (including frontispiece) A-V⁸ X⁴; 168ℓ.; [8], 1-328 p., 14 plates (pp. 8, 15, 34, 121, 143, 219, 226, 273, 296, 298, 304, 306, 314 and 314). Ornamental initials and headpieces. PAGE SIZE: 140 x 92 mm.

CONTENTS: [2 pgs], Blank, verso frontispiece.; [2 pgs], Title page, verso blank.; [3 pgs], Dedication to Cosme de Medicis, signed Boccone.; [1 pg], "Le Libraire au Lecteur."; 1-328, Text.

VERY SCARCE. Deals with ants, etc., and a view of Mt. Etna. A remarkable work by the celebrated Sicilian naturalist Paul Boccone [1633-1704]. It is written in the form of letters addressed to the celebrated scholars of the age, such as Lor. Bellini, Franc. Redi, Nic. Steno, Jean Swammerdam, Nic. Tulpius etc. and covers a wide miscellany of topics in natural history.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 345. • Hoover Collection: no. 138. • Hunt Botanical Catalog: no. 330. • LKG: XVII 9. • Roller & Goodman, *Catalogue*, 1976: 1, 126. • Sinkankas, *Gemology Bibliography*, 1993: no. 735.

Osservazioni Natvrali

667. — Italian, 1684 [First edition].

Osservazioni | Natvrali | Ove Si Contengono | Materie Medico-Fisiche, e di | Botanica, | Produzioni Naturali, Fosfori di- | versi, Fuochi sotteranei | d'Italia, & altre curiosità | Disposte In Trattai | Familiar | Da D. Paolo Boccone, | E dirette a varij Cavalierj, e Letterati | del nostro Secole, si condo lo stile delle | Accademie Fisico-Matemata- | tiche d'Europa. | [ornament] | In Bologna per li Manolesi Stamp. Camer. | [rule] | Con licenza de'Superiori, 1684.

12°: A⁶ A-Q¹² R⁸; 206ℓ.; [12], 400 p., 2 plates (one after dedication, one facing page 228). PAGE SIZE: 158 x 80 mm.

VERY SCARCE. Contains essays on medicine and natural history, written in a series of letters to various savants throughout Europe, including Steno, Redi,

Hooke, Grew and John Ray, cover a variety of topics, including corals, ammonites, petrified shark' teeth, the bezoar stone, the eruption of Mount Etna, shells etc. Other topics include the Italian amber, Bologna stone (Barite), native animals and plants (especially Sicily). On pages 329-337 is included a catalogue of rare plants of Sicily, "Delle cause della viridita perpetua di alcune piante." The author was later to establish himself as a pioneer botanist of Sicilian flora.

REFERENCES: LKG: VI 2. • Sinkankas, *Gemology Bibliography*, 1993: no. 737.

Dutch Editions

668. Dutch transl., 1744: Natuurkundige Naspeuringen op proef- en waerneemingen ... Groey der planten ... wonderbare versteeningen van verscheide lighamen; De wording van het Corael, de Star-steenen, de Mynstoffige Bezoar en het verschil van deeze met de dierlijke, de versteende Vis-tanden, Ammon-hoorn, Schelpen, enz... Brandende en vuurbrakende bergen; Inzonderheid van den Etna... alles vervat in verscheide brieven tusschen den Heer Paul Boccone, die van de Koninglijke Societeit der Weenschappen te Londen, en de grootste geleerden van Europa als Professor Ruysch, Swammerdam, en andere gewisselt. Amsterdam, Steeve van Esveldt, 1744.

4°: [6], 293, [1] p., engraved frontispiece, 16 (2 folding) engraved plates.

VERY SCARCE. Dutch language edition of Boccone's epistolary essays on wonders of geology, paleontology, zoology, and the plants of Sicily.

669. Another issue, 1745: Natuurkundige naspeuringen op proef- en waerneemingen gegrond. Zynde behalven een uitvoerige navorssing van den groey der planten ... ook een bestipt onderzoek van de oorzaak der wonderbare versteeningen van verscheide lighamen ... Alles vervat in verscheide brieven tusschen den Heer Paul Boccone ... als den Professor Ruysch, Swammerdam, en andere gewisselt. s'Gravenhage, J. de Cros, 1745.

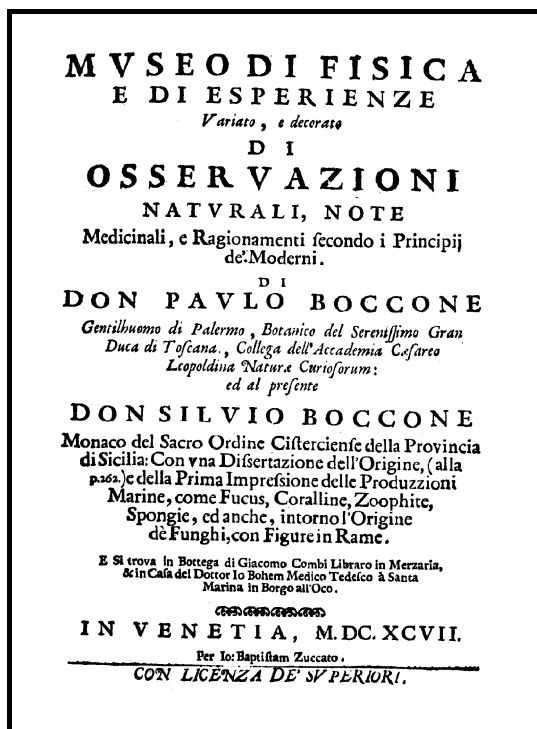
8°: 293 p., plates. VERY SCARCE.

Museo

670. — Italian, 1697 [Collection catalog].

Mvseo Di Fisica | E Di Esperienze | Variato, e decorato | Di | Osservazioni | Naturali, Note | Medicinali, e Ragionamenti secondo i Principij de' Moderni. Di | Don Pavlo Boccone | [...4 lines of title and memberships...] | Don Silvio Boccone | Monaco del Sacro Ordine Cisterciense della Provincia | di Sicilia: Con vna Dissertazione dell'Orgine, (alla | p. 262) e della Prima Impressione delle Produzzioni | Marine, come Fucus, Coralline, Zoophite, | Spongie, ed anche, intorno l'Orgine | de' Funghi, con Figure in Rame. | E Si trova in Bottega di Giacomo Combi Librario in Merzaria, | & in Casa del Dottor Io Bohem Medico Tedesco à Santa | Marina in Borgo all'Oco. | [ornate rule] | In Venetia, M.DC.XCVII. | Per Io: Baptistam Zuccato. | [rule] | Con Licenza De' Svpriori.

4°: π⁴ A-Q⁴ Rr³; 164ℓ.; [8], [1]-319, [1] p., frontispiece (portrait of Boccone), 19 plates (pp. 56, 101, 116, 127, 259, 266-2, 270-2, 289-2, 300-2, 302-2, 303-2, and 305-2.) PAGE SIZE: 240 x 179 mm.



MVSEO DI FISICA E DI ESPERIENZE, 1697

CONTENTS: [Frontispiece.]; [1 pg./= π 1r], Title page.; [3 pgs./= π 1v- π 2v], Dedication.; [2 pgs./= π 3], "Lo Stampatore | Al Lettore." (=preface.); [2 pgs./= π 4], Ad Plvrimvm Reverendvm | Et | Illustrissimvm P.D. Silvium Boccone." (=laudatory poems.); [1]-296 (=A-Oo4), Text.; 297-319, (=Pp-Rr3), "Index."; [1 pg./= π 3v], Blank.

PLATES: Frontispiece shows a portrait of Boccone's head and upper torso in an oval frame. Text at the bottom reads: "D. Paulus Boccone, modó Sylvius, Inde | fessus Sculator Rerum Naturalium | Ætatis LXIII."

VERY SCARCE. Dedicated to Leopold the second, the text consists of some forty-six "Osservazioni" on particular topics in natural history addressed to as many different persons, all prominent individuals from throughout Europe, where Boccone traveled extensively. The first four describe a Sicilian earthquake of 1693. Other topics include alkali and medicinal earths, *Terra Lemnia*, manna, an urn containing ashes, and a balsamic liquor manufactured on the island of Malta, tarantulas and snakes and antidotes to their bite, regular periods of fevers, curious animals, the extraordinary effects of certain plants, mushrooms, common plants, Italian cheeses, *alum di Rocca*, and marine plants. Also included in the text are references to amber, description of an eruption of Vesuvius in 1694, and an account of the geology of Sicily.

Boccone presented a number of items to the Royal Society of London (see *The Philosophical Transactions Abridged*, 2 (1673), p. 116).

REFERENCES: BMC: 1, p. 181. • Gascoigne, *Historical Catalogue of Scientists*, 1984: 2421.3. • LKG: VI 3a. • Murray, *Museums*, 1904: 2, 123. • Nissen (BBI): no. 180

[12 plates only]. • NLM 17th Century Books (Krivatsy): 1407. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: 861. • Roller & Goodman, *Catalogue*, 1976: 1, 126. • Thorndike, *History of Magic*, 1923-58: 8, 37-41. • Wellcome Catalog (Books): 2, 185.

671. German transl., 1697: D. Sylvii Bocconis | [...5 lines of titles and memberships...] | Curiöse | Anmerkungen | Über | Ein uñ ander natürliche Dinge. | Aus seinem | noch nie im Druck gewesenen | Mvseo, Experimental-Physico | zusammen gezogen/ | Und im Durchreisen durch Teutschland/ | zum Andencken seiner in Teutscher Sprach | zum Druck hinterlassen. | [rule] | Franckfurt und Leipzig/ | In Verlegung Michael Rohrlachs seel. Wittib. | und Erben. 1697.

8°: [20], [1]-501, [2] p., frontispiece (portrait of Boccone), 4 engraved plates (3 folding).

PLATES: The engraved frontispiece shows a portrait (age 67) of the upper torso of Boccone seated in a chair. Below is a long inscription that begins "Paulus Boccone Modo Silvius | [...10 more lines...]."

VERY SCARCE. Translation of *Mvseo di Fisica e di Esperienze* (Venetia, 1697) that was published in the same year as the first edition.

REFERENCES: Gamba: no. 1806. • Graesse, *Trésor de Livres Rares*, 1859-69: 1, 457. • NLM 17th Century Books (Krivatsy): no. 1405 [without portrait]. • Sinkankas, *Gemology Bibliography*, 1993: no. 738 [not seen]. • STC: B-1562. • Ward & Carozzi, *Geology Emerging*, 1984: no. 239. • Wellcome Catalog (Books): 2, 185.

BOCK, Friedrich Samuel. (BORN: Königsberg, Germany, 20 May 1716; DIED: Königsberg, Germany, September 1786) *German classicist.*

Bock was professor of theology and Greek at the University of Königsberg, where he also became the first librarian of the University. He authored numerous works in theology, and Prussian history and natural history.

REFERENCES: ADB. • *Biographie Universelle*: 4, 629-30. • DBA: I 112, 90-131. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 217. • WBI.

672. — German, 1767.

Versuch | einer kurzen | Naturgeschichte | des | Preußischen Bernsteins | und einer | neuen wahrscheinlichen Erklärung | seines Ursprunges, | [ornament] | von | Friedrich Samuel Bock. | [double rule] | Königsberg, | bey J.D. Zeisens Wittwe und J.H. Hartungs Erben. 1767.

8°: [1]-146 p. PAGE SIZE: 206 x 126 mm.

RARE. Describes and theorizes on the origin of amber. A bibliography is included that cites references in learned journals to Prussian amber. Sinkankas gives a full description.

REFERENCES: *Berlinische Sammlungen*: 3 (1767), 638. • *Erlanger gelehrte Beyträge*: 1768, p. 152-4. • *Journal encyclopédique*: 1768, 3, p. 148. • *Leipziger gelehrte Zeitung*: 1767, p. 483. • LKG: XVI 162. • Roller & Goodman, *Catalogue*, 1976: 1, 126. • Sinkankas, *Gemology Bibliography*, 1993: no. 739. • USGS Library Catalog. • Ward & Carozzi, *Geology Emerging*, 1984: no. 240.

673. — German, 1782-5.

Versuch einer wirthschaftlichen Naturgeschichte von Ost- und West-Preußen, worinnen nicht nur die in den dreyen Naturreichen des Landes vorkommenden Körper angezeigt und beschrieben. Dessau, Buchhandlungen der Gelehrten, 1782-5.

BOCKENHOFFERO

5 vols. [VOL 1: 1782] 8°: XXXVIII, 830 p., illus. [VOL 2: 1783] 8°: XXVIII, 640 p., illus. [VOL 3: 1783] 8°: XXXI, 1027 p. [VOL 4: 1784] 8°: VII, 758 p., illus. [VOL 5: 1785] 8°: XL, 768 p., illus.

RARE. An extensive examination of the natural history wonders in the kingdoms of east and west Prussia. The first volume gives a general geography, anthropology, meteorology and history of the region. Volume two is a mineralogical description giving information on the minerals, mines, fossils, stones, etc. found in Prussia. The third volume is a botanical account of the land, while the fourth describes the indigenous animals, birds, amphibians and fish. The fifth and final part is a description of the insects and worms, as well as containing supplemental material to the other sections.

Contents: Band 1: welcher allgemeine geographische, anthropologische, meteorologische und historische Abhandlungen enthält. Band 2: welcher das unterirdische Preussen oder das Fossilienreich dieses Landes beschreibt. Band 3: welcher eine Beschreibung des Pflanzenreiches dieses Landes in sich begreift. Band 4: welcher die inländischen Säugethiere, Vögel, Amphibien und Fische beschreibt. Band 5: welcher die Beschreibung von einigen preussischen Insekten und Würmern ... liefert ... Mit 3 Kupfertafeln.

REFERENCES: BL: [955.i.9-13.]. • LKG: XIV 740.

BOCK, Max. *German mineralogist.*

674. — German, 1868.

Über einige schlesische Mineralien, deren Constitution und einige andere analytische Resultate. Breslau, 1868.

8°: 26 p.

RARE. This is a brief review of the mineral species found in Schlesia, together with analytical results from a chemical standpoint.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 269.

BOCKENHOFFERO, Johann Joachim. *French educator.*

Bockenhoffero was professor of rhetoric at the University of Strasbourg, from which in 1678, he had been awarded an advanced degree in the same subject.

REFERENCES: DBA: I 112, 342. • Jöcher, *Gelehrten-Lexikon*, 1750-51: Suppl. 1, 1 (1784), col. 1943. • Poggendorff: 1, col. 270?. • WBI.

675. — Latin, 1677 [Collection catalog].

Mvsævm | Brackenhof- | ferianum | delineatum |
à | Joh. Joachim Bockenhoffero | Argentinensi. |
Argentorati. | [rule] | Anno Recvperatæ Salvts. |
cId. Idc. LXXVII.

4°: A-F⁴ G²; 26ℓ.; [1]-52 p.

CONTENTS: [1-2], Title page, verso blank.; 3-6, Preface, text starting "Accede Hspes, | Quicunque rerum pulchrarum desiderio teneris. | ..."; 7-8, Dedication?, text starting "Illustris Vir | Dn. | Elias Brackenhoffer, | ..."; 9-52, Text.

VERY RARE. This catalog describes the fine library and art and natural history collections of Élie Brackenhoffer [see note below]. The author follows Brackenhoffer's physical layout by dividing the collection into Fossil, Vegetable, Animal and Artificial.

MVSÆVM BRACKENHOF- FERIANUM

delineatum

à

JOH. JOACHIMO BOCKENHOFFERO

Argentinensi.

ARGENTORATI.

ANNO RECVPERATÆ SALVTIS.

cId. Idc. LXXVII.

MVSÆVM BRACKENHOFFERIANUM, 1677

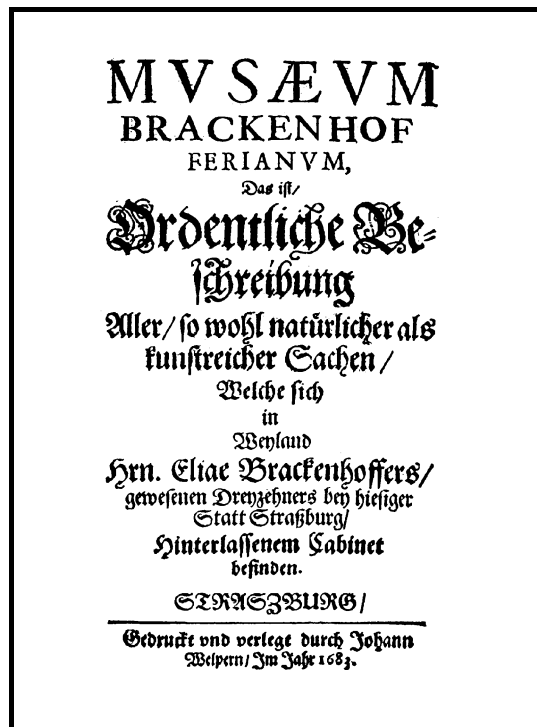
Every object found a place under one of these heads, and the text reveals most of his natural history specimens were mineralogical, which were consequently listed under Fossil. The divisions of this class included metals, stones, and mineralia media. The metals were divided between natural and artificial, while the subdivisions of the stones show the uncritical character of the mineralogy of the time. These were classified into: Lapidēs majores molles, stones taken from animals, meteoric stones, Lapidēs fossiles minores, Silices minores, petrifications including petrified wood, the petrified molar of an elephant, gems and precious stones, and corals. The mineralia media included the earths and sulphur. Among the animals a crocodile can be found. The vegetables stood by themselves. The primary division of Artificial items was into objects made of wood, glass or ivory, while other groupings included pictures, gold and silver work, works of art in marble, wax and other materials, antiquities and coins.

This is a luxuriant volume printed on fine paper stock in red and black throughout with marvelous typography. Although very rare, it attracted enough notice to have an abstract reprinted in MICHAEL BERNHARD VALENTINI's *Museum Museorum*, Frankfurt am Mainz, 1714, vol. II, appendix XX, pp. 69-81. In addition, several letters in FRANZ ERNST BRÜCKMANN's *Epistolæ Itinerariæ* reference Brackenhoffer's collection (See: 1, Epistola 39-47, 57-60, 64-65, & 81-84).

Élie Brackenhoffer. (BORN: Strasbourg, France, 27 March 1618; DIED: 1682) *French bibliophile.* French

bibliophile and noted humanist, Brackenhofer undertook several journeys throughout France, Germany and Italy. He developed a taste for collecting objects of all types, and built a large cabinet containing ancient coins, books, sculpture and art, and natural history. His coin collection was cataloged in 1665.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 18. • BL: [B.431.(8.)]. • Cobres, *Deliciae Cobresianae*, 1782: 1, 117. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 271. • Murray, *Museums*, 1904: 1, 214 & 2, 134. • NUC: [no copy listed]. • Schröter's *Journal für die Liebhaber*: 1, pt. 1, 17. • Wilson, *History of Mineral Collecting*, 1994: 206. (Brackenhofer) ABF: I 148, 316-317, 441; II 96, 106. • Bonnafé, *Dictionnaire des Amateurs Français*, 1884. • DBF: 7, col. 131 [by T. De Morembert]. • WBI.



MVSÆVM BRACKENHOFERIANVM, 1683

676. German transl., 1683: Mvsævm Brackenhof- | ferianvm, | Das ist/ | Ordentliche Be= | schreibung | Aller/ so wohl natürlicher als | kunstreicher Sachen/ | Welche sich | in | Weyland | Hrn. Eliae Brackenhoffers/ | gewesenem Dreyzehners bey hiesiger | Statt Straßburg/ | Hinterlassenen Cabinet | befinden. | Straszburg/ | [rule] | Gedruckt vnd verlegt durch Johann | Welpert/ Im Jahr 1683.

8°: A-U⁸; 80ℓ.; [1]-160 p.

CONTENTS: [1-2], Title page, verso blank.; 3-160, Text.

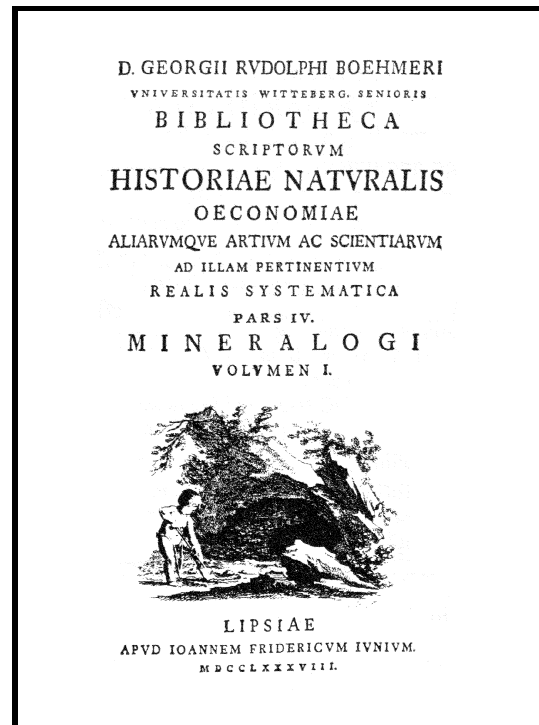
RARE. Translation of *Musæum Brackenhoferianum* (Argentorati, 1677), described as an ordinary description of all the artistic natural objects contained in the Eliae Brackenhofer's cabinet, which was thirty years in the making.

REFERENCES: BL: [957.b.33.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 271. • Murray, *Museums*, 1904: 1, 214 & 2, 134. • NUC: [no copy listed]. • Schröter's *Journal für die Liebhaber*: 2, 39. • Wilson, *History of Mineral Collecting*, 1994: 206.

BOEHMER (Böhmer), Georg Rudolph. (BORN: Liegnitz, Germany, 1 October 1723; DIED: Wittenberg, Germany, 4 April 1803) *German physician & bibliographer.*

Boehmer, the author of many works on natural history, was a professor of anatomy and botany at the University of Wittenberg.

REFERENCES: Börner, *Vornehmsten Lebensumständen*, 1749-64. • DBA: I 117, 364-387; II 146, 77-79. • Ferchl. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Poggendorff: 1, col. 223. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • WBI.



BIBLIOTHECA SCRIPTORVM, 1788

677. — German, 1788-9 [Bibliography].

D. Georgii Rvdolphi Boehmeri | Vniversitatis Witteberg. Senioris | Bibliotheca | Scriptorvm | Historiae Natvralis | OEconomiae | Aliarvmqve Artivm Ac Scientiarvm | Ad Illam Pertinentivm | Realis Systematica | Pars IV. | Mineralogi | Volvmen I. [-II.] | [vignette] | Lipsiae | Apvd Ioannem Fridericvm Ivnivm. | MDCCCLXXXVIII.

Complete set: 5 parts in 9 vols. [Part I, vol 1: 1785, *Scriptores generales*] 8°: [2], [i]-xviii, [1]-778 p. [Part I, vol 2: 1785, *Scriptores generales*] 8°: [4], [1]-772 p. [Part II, vol 1: 1786, *Zoologi*] 8°: [4], [1]-604 p. [Part II, vol 2: 1787, *Zoologi*] 8°: [2], [i]-xxx, [1]-536 p. [Part III, vol 1: 1787, *Phytologi*] 8°: [1]-808 p. [Part III, vol 2: 1788, *Phytologi*] 8°: [2], [1]-642 p. [Part IV, vol 1: 1788, *Mineralogi*] 8°: [2], [1]-510 p. [Part IV, vol

BOEKE

2: 1788, Mineralogi] 8°: [2], [1]-412 p. [Part V: 1789, Hydrologi Acc. Index vniversalis] 8°: [2], [i]-x, [1]-740 p. PAGE SIZE: 194 x 112 mm.

CONTENTS: [Part I, vol 1] [2 pgs], Blank, verso title page in German.; [i-ii], Title page in Latin, verso blank.; [iii], Sectional title page, "Literatur | Der | Naturgeschichte | Erster Theil."; [iv]-xv, "Praefatio." & "Vorrede."—Foreword in both Latin and German on opposite pages.; xvi-xviii, Table of contents in Latin and German.; [1]-778, Text.

[Part I, vol 2] [2 pgs], Blank, verso title page in German.; [2 pgs], Title page in Latin, verso blank.; [1]-772, Text.

[Part II, vol 1] [2 pgs], Blank, verso title page in German.; [2 pgs], Title page in Latin, verso blank.; [1]-604, Text.

[Part II, vol 2] [2 pgs], Blank, verso title page in German.; [i-ii], Title page in Latin, verso blank.; [iii]-xxx, "Anstatt | Der Vorrede."; [1], Sectional title page, "Pars II. | Zoologi | Vol. II. | Zweyter Theil | Thierreich | Zweyter Band."; [2], Blank.; [3]-536, Text.

[Part III, vol 1] [1-2], Blank, verso title page in German.; [3-4], Title page in Latin, verso blank.; [5], Sectional title page, "Pars III. | Phytologi | Vol. I. | Dritter Theil | Gewaechsreich | Erster Band."; [6], Blank.; [7]-808, Text.

[Part III, vol 2] [2 pgs], Blank, verso title page in German.; [1-2], Title page in Latin, verso blank.; [3], Sectional title page, "Pars III. | Phytologi | Vol. I. | Dritter Theil | Gewaechsreich | Zweyter Band."; [4], Blank.; [5]-642, Text.

[Part IV, vol 1] [2 pgs], Blank, verso title page in German.; [1-2], Title page in Latin, verso blank.; [3], Sectional title page, "Pars IV. | Mineralogi | Vol. I. | Vierter Theil | Mineralreich | Erster Band."; [4], Blank.; [5]-510, Text.

[Part IV, vol 2] [2 pgs], Blank, verso title page in German.; [1-2], Title page in Latin, verso blank.; [3], Sectional title page, "Pars IV. | Mineralogi | Vol. I. | Vierter Theil | Mineralreich | Zweyter Band."; [4], Blank.; [5]-412, Text.

[Part V] [2 pgs], Blank, verso title page in German.; [2 pgs], Title page in Latin, verso blank.; [i]-x, "Praefatio. Vorrede."; [3], Sectional title page, "Pars V. | Hydrologi. | Fünfter Theil | Wasswerreich."; [4], Blank.; [5]-339, Text.; 400-431, Combined table of contents in Latin and German for the five parts.; 432-666, Name index to all parts.; 667-740, Index to the anonymous works listed in the bibliography.

RARE. Listing c65,000 books and articles, this massive compilation is a classified bibliographical guide to works on natural history published from the fifteenth through the eighteenth centuries. Entries often include references to reviews or other commentary. The complete five parts are arranged in nine volumes: Pars I, Scriptores generales (general works, 2 vols.), Pars II, Zoologi (zoology, 2 vols.), Pars III, Phytologi (phytology or plants, 2 vols.), Pars IV, Mineralogi (mineralogy, 2 vols.), and Pars V, Hydrologi (hydrology, one vol.). A lengthy name index (including a separate one for anonymous works) is included at the end of the last volume (pp.432-740).

The fourth section, published in two volumes concerns mineralogy and the earth sciences. This bibliography was compiled with much perseverance on the part of Boehmer, with the list, which is less complete with regard to non-Germans, extending to the year 1784. However, the compiler did not know mineralogy as a science. Consequently, the classification

of the entries is somewhat jumbled. For example, writings on mining, mine engineering, mining law, instruction on goldsmithing, glaringly occur with other titles about mineralogical systems. Additionally, many mineralogical works are listed in volume one devoted to general writings that includes a lengthy section concerning natural history collections and museums (1, pp. 369-411). None the less, Boehmer's bibliography of mineralogy ranks with Gatterer's *Allgemeines Repertorium der mineralogischen, bergwerks= und salzwerkwissenschaftlichen Literatur* (Giessen, 1798-9) as one of the best compilations of the 18th century, and although not stated, Gatterer clearly relied upon Boehmer's prior work in his compilation.

REFERENCES: Besterman, *Bibliography of Bibliographies*, 1965-6. • BMC: 1, 184. • Bridson, *History of Natural History*, 1994: Ca92. • Graesse, *Trésor de Livres Rares*, 1859-69: 1, p. 461. • Johnson, D.E., "A concordance of abbreviations used in references to reviews in botanical bibliographies by Cobres (1782), Böhmer (1787) and Miltitz (1829)," *Huntia*, 3 (1979), 103-14. • LKG: (intro to bibliography) & I 14. • Murray, *Museums*, 1904: 2, 3. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 546.

BOEKE, Hendrik Enno. (BORN: Wormerveer, The Netherlands, 12 September 1881; DIED: Frankfurt am Main, Germany, 6 December 1918) *Dutch mineralogist & geologist.*

Boeke settled in Germany in 1905. He became professor of mineralogy at the University of Leipzig in 1908. In 1911, he relocated to the University of Halle, and in 1914 to the University of Frankfurt-am-Main, where he remained. He worked primarily on studying minerals from a physico-chemical standpoint.

REFERENCES: DBA: II 146, 307-310. • *Mineralogical Magazine*: 19 (1921), no. 95, 242. • NDB: 2, 397 [by H. O'Daniel]. • Poggendorff: 5, 134. • Sarjeant, *Geologists*, 1980: 2, 575-6. • WBI. • *World Who's Who in Science*: 199. • *Zentralblatt für Mineralogie*: 1919, 90-6.

678. — German, 1911.

Die Anwendung | Der | Stereographischen Projection | Bei Kristallographischen Untersuchungen | Von | Prof. Dr. H.E. Boeke | [rule] | Mit 57 Textabbildungen Und Einer Lithographischen Tafeln | [rule] | Berlin | Verlag Von Gebrüder Borntraeger | W35 Schöneberger Ufer 12a | 1911.

8°: π^4 1-3⁸ 4⁶; 34 ℓ .; [i]-viii, [1]-58, [2] p., 57 illus. In a back pocket there are found, "Stereographische Projektions." PAGE SIZE: 232 x 156 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, ..."; [iii]-vi, "Vorwort."—signed H.E. Boeke, February 1911.; [vii]-viii, "Inhalt."; [1]-58, Text.; [1 pg], Blank.; [1 pg], Advertisements.

SCARCE. This work introduces and describes the use of stereographic projections in crystallography. This technique, still used today, plots the angles of a crystal form onto a special graph. This work includes discussions of angle measurement, polar coordinates, Wulff nets and their construction and how it is applied to the seven crystallographic systems. Examples of the stereographic projections are found in a back pocket.

REFERENCES: Dana's 7th (Bibliography): 66.

679. — German, 1913.

Die Gnomonische Projektion | In Ihrer Anwendung
| Auf Kristallographische Aufgaben | Von | Dr.
H.E. Boeke | Professor An Der Universität In Halle
| [rule] | Mit 49 Textfiguren | [rule] | Berlin | Verlag
Von Gebrüder Borntraeger | W35 Schönberger Ufer
12a | 1913.

8°: π^2 1-38 44; 30ℓ.; [i]-iv, [1]-54, [2] p., 49 illus.

PAGE SIZE: 198 x 130 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, |
..."; [iii]-iv, "Inhalt."; [1]-54, Text.; [1 pg], Blank.; [1 pg],
Advertisements.

SCARCE. This work provides an introduction to "gnomonic" projection and its application in crystallography. The work defines the projection technique, the foundations of its construction, creation of stenographic projections, elements of the different crystal systems, method of labeling crystal faces, and the conversion of symbols onto the projection.

REFERENCES: Dana's 7th (Bibliography): 66.

BOËTIUS DE BOODT, Anselmus.

See: Boodt, Anselmus Boëtius De.



CATÁLOGO , 1912

BOFILL Y POCH, Arturo.**680. — Spanish, 1912 [Collection Catalog].**

Catálogo | De La | Colección Mineralógica |
Del | Museo Municipal De Ciencias Naturales |

(Museo Martorell) | (Publicado por acuerdo de la
Iltre. Junta de Ciencias Naturales) | [ornament]
| Barcelona | [short rule] | A. López Robert,
impresor-Asalto, 63 | 1912.

8°: [1]-88 p. PAGE SIZE: 212 x 138 mm.

CONTENTS: [1-2], Half title page, verso blank.; [3-4],
Title page, verso blank.; [5]-6, Preface, signed Arturo Bofill
y Poch, 30 December 1911.; [7]-81, Text.; [82], Blank.; [83]-
88, "Índice Alfabético."

RARE. A standard catalog describing the mineral collection of the Municipal Museum in Barcelona. Arranged according to Dana's classification, the exact localities of specimens contained in the collection are given.

REFERENCES: BL: [no copy listed].



BØGGILD

BØGGILD, Ove Balthasar. (BORN: 16 May 1872; DIED: Copenhagen, Denmark?, 1956) *Danish geologist, mineralogist & crystallographer.*

Bøggild was an assistant at the museum and instructor at the Royal Polytechnic Academy. He wrote accounts of the crystal forms of cryolite, perovskite and boracite of the "labradorization" of the feldspars.

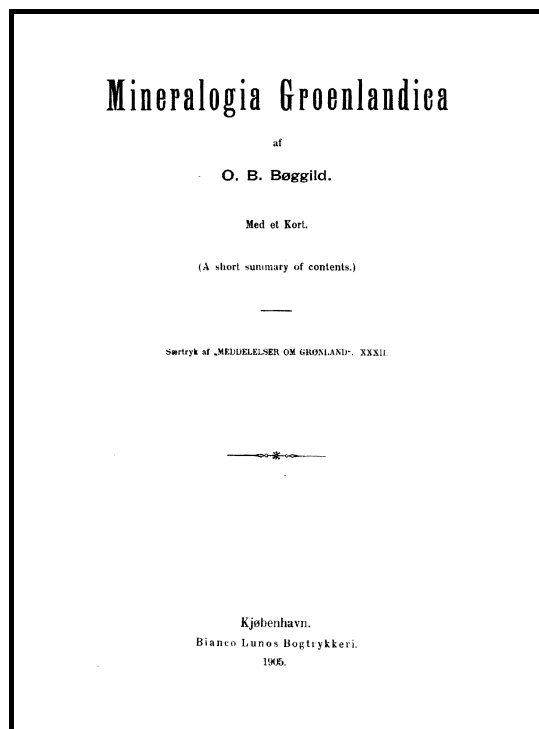
REFERENCES: *Dansk Biografisk Haandleksikon*: 1, 276, portrait. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 2, 437-42, portrait. • *Meddelelser fra Dansk Geologisk Forening*: 13 (1958), pt. 6, 532-6, portrait. • Sarjeant, *Geologists*, 1980: 2, 577. • Teichert, C., "From Karpinsky to Schindewolf - Memories of some great palaeontologists," *Journal of Paleontology*, 50 (1976), no. 1, 1-12, 19 figs.

681. — Danish, 1905 [First edition].

Mineralogia Groenlandica | af | O.B. Bøggild. |
Med et Kort. | (A short summary of contents.)
| [rule] | Særtryk af "Meddelelser Om Grønland".
XXXII. | [ornate rule] | Kjøbenhavn. | Bianco Lunos
Bogtrykkeri. | 1905.

8°: [v]-xix, [3], [1]-625, [1] p. PAGE SIZE: 230 x
146 mm.

CONTENTS: [v-vi], Title page, verso blank.; [vii],
"Indholdsfortegnelse."; [viii], Blank.; [ix]-xix, Preface,
with text in English, signed N.V. Ussing, 1 November 1905.;



MINERALOGI GROENLANDICA, 1905

[1 pg], Blank.; [1 pg], Sectional title page, "Mineralogia Groenlandica. | [rule] | Systematisk Fortegnelse over Mineralerne."; [1 pg], Blank.; [1]-600, Text.; [601]-609, "Alfabetisk Fortegnelse over Lokalteterne."; [610]-612, "Alfabetisk Fortegnelse over forældede og forvanskede | Stavemaader for Lokalteterne."; [613]-615, "Alfabetisk Fortegnelse over Mineralerne."; [616]-622, "Tilføelser."; [623]-625, "A Short Summary of Contents."; [1 pg], Blank.

VERY SCARCE. The "classic" mineralogy of Greenland, written at the beginning of the century, and considered valuable enough to have a revised English version prepared five decades later [see below]. The minerals found in Greenland are described in great detail, with exact information on localities and discoverers with complete references. The largest part of the work is a descriptive mineralogy of the 162 mineral species arranged according to PAUL GROTH's, *Tabellarische Uebersicht der Mineralien* (Münich, 1898). Under each are listed the localities and the person to first discover the mineral at that locality, literature, description of occurrence, crystal form, and other properties. Following the descriptive portion is a geographical listing of minerals in Greenland. The remoteness of the region and its unique mineralization make this an interesting and important topographical work.

It was the first attempt at describing the mineralogy of the region and as such it is the basis of all subsequent literature on the subject. Also importantly Bøggild thoroughly studied Greenland minerals in the collections in the Mineralogical Museum

of Copenhagen, which had systematically been collected but never before scientifically examined.

English transl., 1953: Meddelelser Om Grønland | Udgivne Af | Kommissionen For Videnskabelige Undersøgelser I Grønland | Bd. 149 • Nr. 3 | [double rule] | The Mineralogy Of Greenland | By | O.B. Bøggild | [rule] | With 88 Figures In The Text And 1 Map | København | C.A. Reitzels Forlag | Bianco Lunos Bogtrykkeri | 1953. [1]-442 p., one folding map, 88 text figs.

[1-2], Title page, verso blank.; [3], "Contents."; [4], Blank.; [5]-11, "Preface."; [12]-427, Text.; [428]-435, "Alphabetical List Of The Localities."; [438]-442, "Addenda And Corrigenda."; [At end], One folding map.

REFERENCES: Dana's 7th (Bibliography): 67. • NUC.

682. — Danish, 1917.

Lærebog i Krystallografi og Mineralogi. Kjøbenhavn, 1917.

8°:

SCARCE. Standard textbook of crystallography and mineralogy.

Another edition, 1926: *Lærebog i Krystallografi og Mineralogi*. Gyldendal, 1926. 140 p., illus.

BOLTEN, Joachim Friedrich. (BORN: Horst, Holstein, Germany, 11 September 1718; DIED: Hamburg, Germany, 6 January 1796) *German physician*.

Bolten studied medicine at Halle, where in 1740 he was awarded his M.D. Thereafter, he opened a medical practice in Hamburg, which became very successful. He authored several medical works.

REFERENCES: Baur, *Allgemeines historisches Handwörterbuch*, 1803. • DBA: I 123, 291-300; II 152, 44. • Hirsch, *Biographisches Lexikon*, 1884-8. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Wahl, *Naturforschung im alten Hamburg*, 1928: 43. • WBI.

683. — Latin, 1798 [Collection catalog].

Museum Boltenianum | sive | Catalogus cimeliorum | e tribus regnis Naturæ | quæ | olim collegerat | Joa. Fried. Bolten, M.D. p.d. | per XL. annos. Proto physicus Hamburgensis. | [ornate rule] | Pars Secunda | continens | Conchyliia sive Testacea univalvia, | bivalva & multivalvia. | [ornate rule] | Hamburgi, | Typis Johan. Christi. Trappii.

2 parts. [Part 1] 8°: ?? p. [Part 2] 199, [2] p.

RARE. The Latin forward is written by Anton August Heinrich Lichtensten [see note below]. Afterward is a forward in German by the famous collector Peter Friedrich Röding clearly stating this publication was a solicitation to locate a purchaser for the collection. Apparently, no one was forthcoming [see next entry].

Bolten's library was cataloged for sale in 1796: *Bibliotheca Bolteniana sive catalogus librorum ... ex omni genere scientiarum praecipue autem historia naturali, anatomia, chirurgia & arte medica ... Joachim Friedrich Bolten*. (Hamburgi, Trapp, 1796).

Anton August Heinrich Lichtenstein. (BORN: Helmstädt, Germany, 25 August 1753; DIED: Helmstädt, Germany, 16 February 1816) *German theologian & naturalist*. Lichtenstein studied oriental culture, theology, philosophy, physics and natural history in Göttingen, Leipzig and Helmstädt. In 1775, he was appointed rector of the Stadtschule in

Helmstädt. A few years later he became rector at the Johanneum in Hamburg. In 1794, he also took on the role of city librarian. In 1799, Lichtenstein was appointed ordinary professor of theology at the city's University. He retired in 1810.

REFERENCES: (Reprint, 1906) Roller & Goodman, *Catalogue*, 1976: 1, 127. • Wahl, *Naturforschung im alten Hamburg*, 1928: 79 [no. 450]. (Lichtenstein) DBA: I 761, 420-440; 1431, 39-44. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Jöcher, *Gelehrten-Lexikon*, Supplement. • WBI.

684. — German, 1819 [Sale catalog].

Museum Boltenianum. | [wavy rule] | Verzeichniss
| der | von dem verstorbenen | Herrn Joachim
Friedrich Bolten | M.D. und Physicus in Hamburg
| hinterlassen | vortrefflichen Sammlung |
Conchylien, Mineralien | und | Kunstsachen, | die
| am 26. April d. J., Morgens um 10 Uhr | öffentlich
verkauft werden sollen | durch den Makler | Joh.^s
Noodt. | Huxter No. 68. | [rule] | Cat. XXXIII.
| Mit vier auf Stein gezeichneten Platten seltener
Conchylien | Hamburgischen Steindrucks. | [rule]
| Hamburg 1819. | Gedruckt bei Conrad Müller,
Bohnenstrasse No. 151.

8°: 156 p., 4 leaves of plates.

RARE. Auction catalog of Joachim Friedrich Bolten's natural history collections, including a large selection of minerals that occurred on 26 April 1819 in Hamburg. Included is a forward by Johannes Noodt.

REFERENCES: Murray, *Museums*, 1904: 2, 125. • Wahl, *Naturforschung im alten Hamburg*, 1928: 79 [no. 451].

BOLTON, Henry Carrington. (BORN: New York City, New York, U.S.A., 28 January 1843; DIED: 1903) *American chemist & mineral collector.*

Bolton graduated from Columbia in 1862, and then studied chemistry in Paris, Heidelberg, Göttingen, and Berlin. In 1866 he received the degree of PhD from the University of Göttingen, his dissertation describing the fluorine compounds of uranium. He continued to travel before becoming in 1872 assistant in quantitative analysis in the Columbia School of Mines. In 1874 he became chemistry professor at the Woman's Medical College of the New York Infirmary, which he resigned in 1877. He was then appointed professor of chemistry and natural science in Trinity College, where he taught for the next decade. There he opened its new chemical laboratory, built an outstanding 3,000-piece mineral collection, and published a student guide to quantitative analysis, as well as a massive bibliography of the science.

REFERENCES: ABA: I 148, 248-259. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • Herringshaw's *National Library of American Biography*. • MRLA. • *National Cyclopedia of American Biography*. • *Who Was Who in America*.

685. — English, 1893 [Bibliography].

Smithsonian Miscellaneous Collections. | — 850 —
| A Select | Bibliography | Of | Chemistry | 1492-
1892. | By | Henry Carrington Bolton. | [rule] |
Washington, D.C. | 1893.

8°: [i]-xi, [3], 1-1212 p.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Contents."; [iv], Blank.; v-ix, "Preface," signed H.

Carrington Bolton, 1 June 1893.; [x], Blank.; xi, "Number Of Title In The Seven Languages."; [1 pg], Blank.; [1 pg], "Explanation Of Abbreviations And Signs."; [1 pg], Blank.; 1-1158, Text.; 1159-1164, "Abbreviations of Titles of Periodicals."; 1165-1182, "Addenda."; 1183-1212, "Subject Index."

SCARCE. A massive and still useful bibliography of chemistry covering 400 years of material, that because of its broad scope lists many mineralogical titles. Bolton divides the material into seven sections: bibliographies, dictionaries, histories, biographies, chemistry, alchemy, and periodicals. Supplements were published to update the bibliography and add other titles missed.

Facsimile reprint, 1973: New York, Kraus Reprint, 1973.

REFERENCES: NUC.

686. Dissertations, 1897: Smithsonian Miscellaneous Collections. | — 1253 — | A Select | Bibliography | Of | Chemistry | 1492-1897. | By | Henry Carrington Bolton. | [ornate rule] | Section VIII.—Academic Dissertations. | Washington, D.C. | 1898.

8°: [i]-iv, 1-534 p.

CONTENTS: [i-ii], Title page, verso blank.; iii-iv, "Preface."; 1-444, Text.; 445-534, "Subject Index."

SCARCE. In this bibliography, Bolton incorporates the academic dissertations related to chemistry published between 1492 and 1897. This forms an eighth section of his *Select Bibliography of Chemistry*.

Facsimile reprint, 1973: New York, Kraus Reprint, 1973.

REFERENCES: NUC.

687. First suppl., 1898: Smithsonian Miscellaneous Collections. | — 1170 — | A Select | Bibliography | Of | Chemistry | 1492-1897. | By | Henry Carrington Bolton. | [ornate rule] | First Supplement. | Washington, D.C. | 1898.

8°: [i]-ix, [1], 1-489, [1] p.

CONTENTS: [i-ii], Title page, verso blank.; iii, "Contents."; [iv], Blank.; v-vi, "Preface."; vii, "Number Of Title In The Seven Languages."; [viii], Blank.; ix, "Explanation Of Abbreviations And Signs."; [1 pg], Blank.; 1-472, Text.; 473-489, "Subject Index."; [1 pg], Blank.

SCARCE. First supplement, following the same format as the initial bibliography, and incorporating additions to bring the bibliography up to 1897.

Facsimile reprint, 1973: New York, Kraus Reprint, 1973.

REFERENCES: NUC.

688. 2nd Suppl., 1903: Smithsonian Miscellaneous Collections. | A Select | Bibliography | Of | Chemistry | 1492-1897. | By | Henry Carrington Bolton. | [ornate rule] | Second Supplement. | Washington, D.C. | 1903.

8°: [4], 1-462 p.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; 1-396, Text.; 397-462, "Subject Index."

SCARCE. "... The present work contains titles of books published between 1898 and 1902." Bolton died in 1903 while the volume was in press. It continues the format of his previous *Select Bibliography of Chemistry* (1893).

Facsimile reprint, 1973: New York, Kraus Reprint, 1973.

REFERENCES: NUC.

BOMARE, Jacques Christophe Valmont de.

See: Valmont-bomare, Jacques Christoph.

BOMBICCI-PORTA

BOMBICCI-PORTA, Luigi. (BORN: Siena, Italy, 12 July 1833; DIED: 1903) *Italian mineralogist.*

Bombicci was professor ordinary of mineralogy at the University of Bologna from 1860 until 1903. He was curator of the Mineralogical Museum of the University, which includes items from ALDROVANDI's collection.

REFERENCES: ABI: I 173, 164-167, II 70, 240. • De Gubernatis, *Dizionario Biografico*, 1879. • *Dizionario Biografico Italiani*: 11, 388-9 [by A. Gaudiano]. • Mieli, *Gli Scienziati Italiani*, 1921: 2, pt. 1, 59-72, portrait. • Parenti, *Aggiunte al Dizionario*, 1952-60. • Poggendorff: 3, 156-7, 4, 154-5 & ??? • *Rc. Sess. Acad. Sci. st. Bologna. Cl. Sci. Fisich*: 8 (1904). • Sarjeant, *Geologists*, 1980: 2, 580-1. • WBI.

689. — Italian, 1861.

Sunti autografici di un corso di lezioni di Mineralogia generale. Bologna, 1861.

8°: VERY SCARCE.

690. — Italian, 1861.

La classificazione naturale dei minerali. Studi. Pisa: Pei Fratelli Nistri, tipografi librai, 1861.

8°: xxiii, 83 p.

VERY SCARCE. Mineralogy—classification.

REFERENCES: NUC: 65, 229-30 [NB 0620407].

691. — Italian, 1867.

Sulla Associazione poligenica applicata alla classificazione dei Solfuri minerali. Bologna, 1867.

8°:

VERY SCARCE. Classification of Sulfur containing minerals.

692. — Italian, 1868.

La teoria delle associazioni poligeniche applicata allo studio ed alla classificazione dei silicati minerali dal cav. Luigi Bombicci ... Bologna: Stab. tip. di G. Monti, 1868.

8°: xv, 133, [2] p.

VERY SCARCE. Silicates.

REFERENCES: NUC: 65, 229-30 [NB 0620441].

693. — Italian, 1869.

Il Museo Mineralogico della R. Università di Bologna, Guida. ... Bologna: [1869].

8°:

VERY SCARCE. Guide to the mineral collections of the University of Bologna.

694. — Italian, 1882.

... Montagne e vallate del territorio di Bologna: cenni sulla oro-idrografia, geologia, litologia e mineralogia dell' Appennino bolognese e sue dipendenze ... Bologna: Tip. Fava e Garagnani, 1882.

8°: ix, [2], 208 p., 2 folding maps.

VERY SCARCE. Geology, hydrology, lithology and mineralogy around Bologna, Italy. Published by Club Alpino Italiano.

REFERENCES: NUC: 65, 229-30 [NB 0620425].

695. — Italian, 1886.

Sul giacimento e sulle forme cristalline della Datolite della Serra dei Zanchetti. Atto Appennino Bolognese. Memoria 24 Gen., 1886. Bologna, 1886.

8°: VERY SCARCE.

REFERENCES: NUC: 65, 229-30 [NB 0620434].

696. — Italian, 1888.

Le Collezioni | di | Mineralogia | nella | R. Università Di Bologna | [rule] | Anno 1888 | [rule] | Relazione Terza | A S.E. Il Ministro Dell'Istruzione Pubblica Del Regno | [rule] | Prof. Luigi Bombicci | Direttore | [ornate rule] | Bologna | Tipografia Gamberini E Parmeggiani | [rule] | Giugno 1888.

4°: [1]-10⁴; 40ℓ.; [1]-[80] p. In paper wraps, with cover reading: ℓ. Bombicci | [rule] | Il Gabinetto Universitario | di | Mineralogia | In | Bologna | XXVII Anni Dopo La Sua Fondazione | [rule] | Relazione Terza | a S.E. il Ministro | per l'istruzione pubblica | del regno | [ornate rule] | Bologna | Tipografia Gamberini E Parmeggiani | [rule] | 1888. The back wrapper lists the author's publications from 1858 to 1887. PAGE SIZE: 290 x 195 mm.

CONTENTS: [1-2], Blanks.; [3], Title page.; [4], Blank.; [5]-10, General introduction and history of the collection.; 11-18, "I gentili e generosi donatori | di oggetti scientifici, al museo di Mineralogia."; 19-20, "I cambi e le cessioni compensate | dei duplicati fuori catalogo e degli scarti."; 21-22, "I Cataloghi delle collezioni | e del materiale accessorio, nel Museo."; 23-24, "I locali | attualmente assegnati al Museo di Mineralogia."; 25-27, "I modelli cristallografici."; 28-38, "L' Aula Sella."; 39-45, "La collezione delle Meteoriti."; 47-62, "L' aula Meneghini."; 63-67, "L' aula Bianconi."; 68-69, "L' aula Scacchi."; 70-73, "L' aula Aldrovandi. | (Sala Per Le Lezioni) | Collezioni di Mineralogia generale da studio pratico."; 74-75, "Gabinetto da studio e stanze di servizio."; [76], Blank.; 77-78, "Indice."; [79-80], Blanks.

VERY SCARCE. Description with many historical notes of the mineral collection of the University of Bologna (Italy).

REFERENCES: NUC: 65, 229-30 [NB 0620416].

697. — Italian, 1893.

Le Notevoli Particolarità dei Cristalli Mimetici Cubiformi di Pirite Gialla, Scoperti nelle marne gigie Terziarie antiche dei monti della riva (Valle del Dardagna, Appennino Bolognese); Memoria Letta alla R. Accademia delle Scienze dell' Istituto di Bologna nella sessione dell' 8 gennaio 1893. Bologna: Tip. Gamberini e Parmeggiani, 1893.

2°: 48 p., plates. VERY SCARCE.

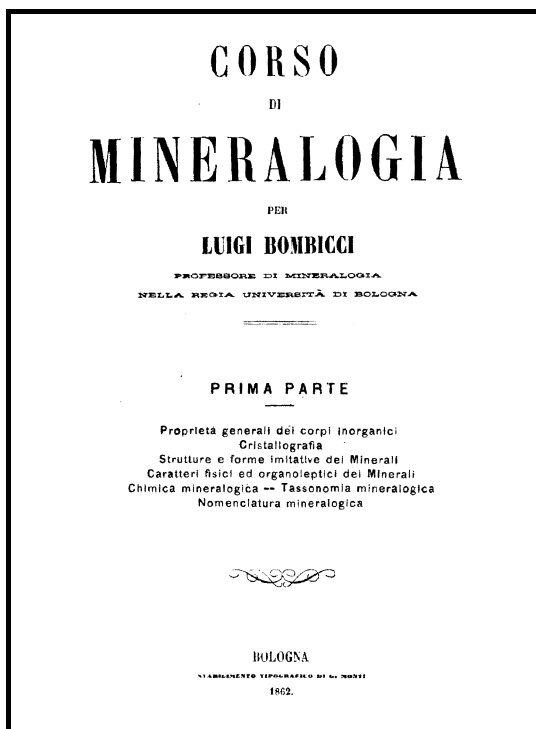
REFERENCES: NUC: 65, 229-30 [NB 0620426].

698. — Italian, 1895.

Descrizione degli esemplari di Solfo nativo cristallizzato delle Solfare di Pomagra raccolti e classificati dall' autore nel Museo Mineralogico della R. Università di Bologna. Bologna, 1895.

8°: VERY SCARCE.

REFERENCES: NUC: 65, 229-30 [NB 0620413].



CORSO DI MINERALOGIA, 1862

699. — Italian, 1862-3 [First edition].

Corso | Di | Mineralogia | Per | Luigi Bombicci | Professore Di Mineralogia | Nella Regia Università Di Bologna | [double rule] | Prima Parte [- Seconda Parte] | [short rule] | Proprietà generali dei corpi inorganici | Cristallografia | Strutture e forme imitative dei Minerali | Caratteri fisici ed organoleptici dei Minerali | Chimica mineralogica -- Tassonomia mineralogica | Nomenclatura mineralogica | [ornament] | Bologna | Stabilimento Tipografico Di G. Monti | 1862 [-1863].

2 parts in one volume. [Part 1: 1862] 8°: π^{13} 2-15⁸; 175 ℓ .; [10], [1]-240 p.; [Part 2: 1863] 8°: 16-58⁸ 59⁶; 287 ℓ .; [241]-803, [1], [I]-XI, [1] p., diagrms., plates, folding table. PAGE SIZE: 230 x 154 mm.

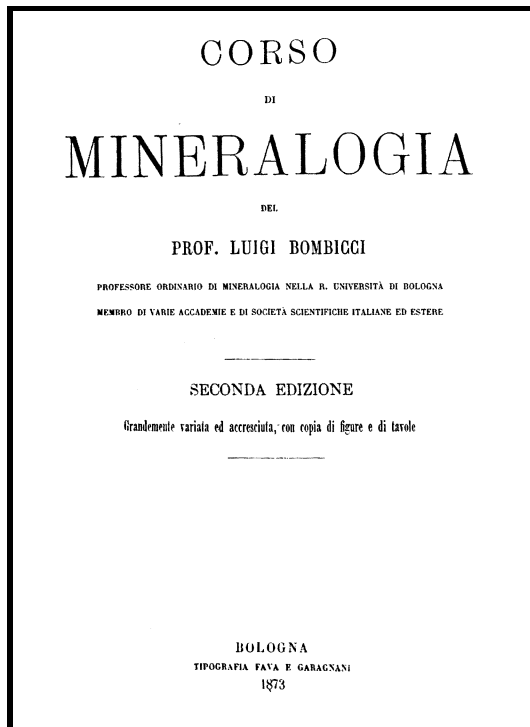
CONTENTS: [Part 1] [2 pgs], Half title page, "Corso | Di | Mineralogia," verso "L'autore intende valersi dei diritti concessi dalle vigenti | ..." [stamped at end with Bombicci's signature]; [2 pgs], Title page, verso blank.; [1 pg], "Avvertenza."; [1 pg], Blank.; [3 pgs], Table of contents.; [1 pg], Blank.; [1]-239, Text.; [240], "Note."

[Part 2] [241-242], Title page, verso blank.; [243]-756, Text.; [Folding table, "Provincie Italiane, Compresse Nell' Itinerario Seguento"]; 757-803, "Tenativo | Di Un | Itinerario Mineralogico Italiano | Ossia | Enumerazione Delle Specie Minerali Proprie | Dei Comuni D'Italia."; [1 pg], Blank.; [I]-XI, "Indice."; [1 pg], "Errata-Corrige."

PLATES: At the end of part 2 there are 42 unsigned, lithographic plates on 21 leaves. They are numbered "Tav. I." to "Tav. XLII." They show a crystal drawings, goniometers (plates XV & XVI), and mineral specimens.

VERY SCARCE. A important and standard Italian textbook on the mineralogical science. The first part of the work defines the terms, methods, nomenclature and classification methods of the science, while the second part provides a comprehensive descriptive mineralogy of 349 species they commonly enter into the formation of rocks. In addition, mineral species of economic importance are also listed.

REFERENCES: Dana's 7th (Bibliography): 67.



CORSO DI MINERALOGIA, 1873

700. 2nd edition, 1873-5: Corso | di | Mineralogia | del | Prof. Luigi Bombicci | [...2 lines of titles and memberships...] | [rule] | Seconda Edizione | Grandemente variata ed accresciuta, con copia di figure e di tavole | [rule] | Bologna | Tipografia Fava E Garagnani | 1873.

2 vols. bound in three. [VOL 1: 1873] 8°: π^6 [1]-35⁸ 36²; 288 ℓ .; [i]-xii, [1]-564 p., 4 plates (pages 58, 331, 337 & 489), index.; [VOL 2, pt 1: 1875] 8°: π^{12} [1]-33⁸; 276 ℓ .; [i]-xxiv, [1]-528 p., figures 1-329, 4 plates (pages 60, 62, 84 & 284).; [VOL 2, pt 2: 1875] 8°: π^4 34-64⁸ 65⁴; 253 ℓ .; [4], [529]-1031, [1] blank p., figures 330-647.

CONTENTS: [Vol 1] [i-ii], Half title page, "Corso di Mineralogia," verso blank.; [iii-iv], Title page, verso "Adempiutosi dall' Autore a quanto prescrive la legge, | si riserva la proprietà letteraria."; [v], [Preface]—signed L. Bombicci.; [vi], Blank.; [vii]-xii, "Indice Generale | Della Prima Parte."; [1]-562, Text.; [563]-564, "Indice Dei Nomi Degli Autori | Citati In Questo Primo Volume."

[Vol 2, pt. 1] [i-ii], Half title page, "Corso di Mineralogia," verso blank.; [iii-iv], Title page, "... | [rule] | Volume 2.^o— Parte 1.^a | [rule] | Bologna | Tipografia Fava E Gargnani | 1875." verso "Adempiutosi dall' Autore a quanto prescrive la legge, | si riserva la proprietà letteraria."; [v]-vi, "Indice General | Del Secondo Volume."; [vii]-viii, "Avvertenze."; [ix], "Descrizione |

BONARDO FRATTEGGIANO

Delle | Specie Minerali.”; x, Table of elements.; [xi]-xxiv, “1. La Serie Delle Specie Minerali.”; [1]-528, “Descrizione Delle Specie Minerali | Più Importanti A Conoscersi.”

[Vol 2, pt. 2] [i-ii], Half title page, “Corso di Mineralogia,” verso blank.; [iii-iv], Title page, “... | [rule] | Volume 2.^o— Parte 2.^a | [rule] | ...,” verso “Adempiutosi dall’ Autore a quanto prescrive la legge, | si riserva la proprietà letteraria.”; [529]-1012, Descriptive mineralogy continued.; 1013-1014, “Indice Dei Nomi Degli Autori | Citati Nel Secondo Volume.”; [1015]-1031, “Indice Generale | Dei Nomi Delle Specie Minerali, Ed Altri | Citati Nel Secondo Volume.”; [1 pg], Blank.

VERY SCARCE. A thorough treatment of mineralogy. In the preface, Bombicci writes that advances in mineralogy have made this new edition a necessity. Volume one covers all facets of mineralogical science, including chemistry, physical properties, and crystallography. A large section is devoted to twisting and curving crystals and theoretical reasons why they occur. The author was an expert in this area and the chapters devoted to the subject are the best treatment to the time. In this period before the invention of x-ray analysis, the long discussion about the molecular structure within crystals and how atoms come together to create crystalline substances is especially interesting. The artificial production of crystallized minerals is also considered. At the end of the volume, Bombicci describes reasons for placing minerals species into a systematic order as well as the nomenclature applied to mineralogy. Volume 2 is mostly occupied by a descriptive mineralogy. Species are characterized by name, synonyms, chemical formula, localities. Many are also illustrated by crystal drawings showing their idealized forms. Volume 2 concludes with a list of authors mentioned in the text and a general index to the mineral species described.

REFERENCES: Dana’s 7th (Bibliography): 67. • NUC: 65, 229-30 [NB 0620411-2].

701. — Italian, 1880 [First edition].

... Mineralogia Generale. Milano, Ulrico Hoepli, 1880.

8^o: xiv, 174 p., illus., plates. At head of title: Manuali Hoepli.

VERY SCARCE. Mineralogy–textbooks.

702. 2nd edition, 1889: Manuali Hoepli | [wavy rule] | Mineralogia | Generale | Di | Luigi Bombicci | [...2 lines of titles and memberships...] | [rule] | con 183 incisioni e 4 tavole cromolitografiche | [rule] | Seconda edizione riveduta. | [ornament] | Ulrico Hoepli | Editore-Librajo Della Real Casa | Milano | 1889.

8^o: [i]-xiv, [1]-189, [1] p., 4 colored plates (showing optical interference patterns), illus., diagrams. PAGE SIZE: 150 x 100 mm. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso “Proprietà Letteraria.”; [iii]-vi, “Indice.”; [vii]-xiv, “L’Autore Al Lettore.”—signed L. Bombicci.; [1]-189, Text.; [1 pg], Blank.; [At end], 4 color plates.

Contents: Introduzione. I. Un museo di mineralogia generale. II. Le collezioni per gli elementi di morfologia mineralogica. III. Il laboratorio dove si analizzano chimicamente i minerali. IV. Il gabinetto dove si studia la fisica dei minerali. V. le collezione speciale di cristallografia. VI. La fisica de cristalli. Conclusione.

REFERENCES: NUC: 65, 229-30 [NB 0620422-3].

703. Supplement, 1889: Errata-Corrige per un Manuale de Mineralogia e per la recensione di questo fatta da un Professore di Università. Bologna, Zamorani-Albertazzi, 1889.

8^o: 16 p. VERY SCARCE.

REFERENCES: NUC: 65, 229-30 [NB 0620415].

704. 3rd edition, 1906: Mineralogia generale. 3a edizione per cura di P. Vinassa de Regny. Milano, Hoepli, 1906.

8^o: xvi, 219 p., illus., plates (some colored), diagrms., tables. Published as: Manuali Hoepli. Serie scientifica. 25.

VERY SCARCE. Mineralogy–textbooks. Edited by P. Vinassa de Regny.

REFERENCES: NUC: 65, 229-30 [NB 0620424].

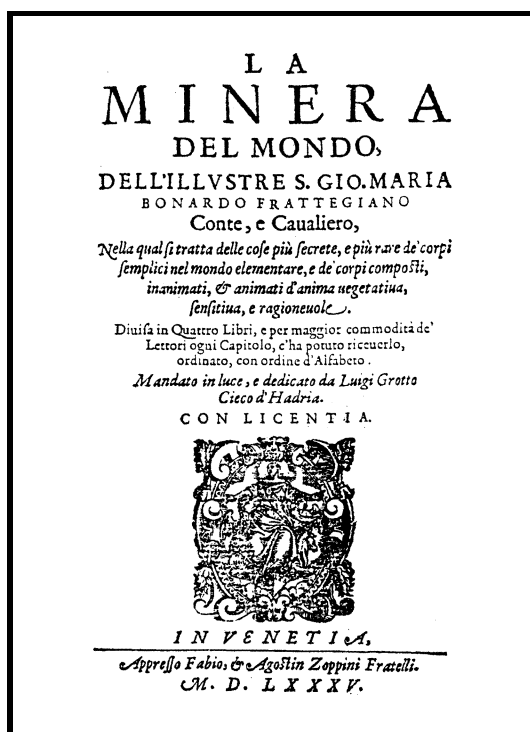
705. 2nd edition, 1895: Manuali Hoepli | [rule] | Mineralogia | Descrittiva | Di | Luigi Bombicci | Prof. ordinario di Mineralogia nella R. Università di Bologna. | [rule] | con 124 incisioni intercalate nel testo | [rule] | Seconda edizione rifatta. | [ornament] | Ulrico Hoepli | Editore Librajo Della Real Casa | Milano | [short rule] | 1895.

12^o: [i]-v, [1], [1]-376, [1]-31, [1] p. PAGE SIZE: 148 x 100 mm.

CONTENTS: [i-ii], Title page, verso “Proprietà Letteraria.”; [iii]-v, “L’Autore Al Lettore.”; [1 pg], Blank.; [1]-355, Text.; [356], Blank.; [357], “Indice De Quadri Sinottici.”; [358], Blank.; [359]-376, “Indice Alfabetico.”; [1]-31, Publisher’s list.; [1 pg], Another publisher’s list.

VERY SCARCE. Written as a conclusion to the author’s *Manuale*, this work is a systematic treatment of the mineral species in a chemical system.

REFERENCES: NUC.



LA MINERA, 1585

BONARDO FRATTEGGIANO, Giovanni Maria.

(BORN: c1540; DIED: c1589) *Italian aristocrat & author.*

REFERENCES: *Dizionario Biografico Italiano*: 11, 573-5. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • *Nouvelle Biographie Générale* (Hofer). • WBI.

706. — Italian, 1585 [First edition].

La | Minera | Del Mondo | Dell’Illvstre S. Gio. Maria | Bonardo Frattegiano | Conte, e Cauliero,

| Nella quale si tratta delle cose più secrete, e più rare de' corpi | semplici nel mondo elementare, e de' corpi composti, | inanimati, & animati d'anima uegetatiua, | sensitiua, e ragioneuole. | Diuisa in Quattro Libri, e per maggior commodità de' | Lettori ogni Capitolo, c'ha potuto riceuerlo, | ordinato, con ordine d'Alfabeto. | Mandato in luce, e dedicato da Luigi Grotto | Cieco d'Hadria. | Con Licentia. | [vignette] In Venetia, | [rule] Appresso Fabio, & Agostin Zoppini Fratelli. | M. D. LXXXV.

8°: a⁸ A-O⁸; [8], 112 ℓ ., no pagination, 2 full page woodcut portraits (the author and the editor).

VERY RARE. Bondardo's *Riches of the World* is an interesting mineralogy that deals not only with minerals, metallurgy and related subjects, but with all the natural resources of the earth including plants and animals. It is divided into four books of which the first treats the earth, including the mountains, different kinds of water like rivers and oceans, air and lightning. Book two deals with metals, minerals, mines, etc.; the third book is concerned strictly with botanical issues; and the fourth deals with animals, including snakes, fishes and birds. There is a long passage in the third book on tobacco ("Negotiana") smoked by American Indians with a pipe made from stone. In addition several other references to America are made, but the title is not noticed by Sabin. The work is dedicated to Luigi Groto [1541-1585], who also edited the book. Two woodcut portraits are included, one of the author, the other of the editor. The basic text, apparently with little or no revision, was reissued at least five times until 1669. All editions of this work are rare.

Other editions:

1589: In Venetia, Appresso F. & A. Zoppini Fratelli, 1589. [8], 112 ℓ ., 2 portraits.

1591: Mantoua, Francesco Osanna, 1591. [8], 178 (i.e., 180), [3] p. Numbers 112 and 127 repeated in pagination. [BL Shelfmark 1568/1831.]

1600: In Venetia, Appresso G. Zoppini, & Fratelli, 1600. [8], 112 ℓ . [BL Shelfmark 446.a.44.]

1611: In Venetia, Presso Antonio Turini, 1611. [7], 112 ℓ .

1669: In Venetia, Appresso Gio. Battista Cestari, 1669. [10], 264 p.

REFERENCES: BL: [no copy of the 1585 edition is listed]. • Dickson, *Panacea-Tobacco in Literature*, 1954: p. 93-4 [gives a full account of the book]. • Hurum, J.H. and G. Cortese, "La Minera del Mondo, en steinbok fra 1585," *Stein*, 1 (1995), 5-30. • *Index Aureliensis*: 121-668. • Lathrop C. Harper, Bookseller: cat. 219, no. 46. • NUC: 65, 346 [NB 0623250]. • Sabin, *Dictionary*, 1868-1936: [no copy listed]. • Wellcome Catalog (Books): 1, no. 958.

BONDAROY, Jean de la Taille de.

See: *La Taille De Bondaroy, Jean De.*

BOODT, Anselmus Boëtius de. (BORN: Bruges, Belgium, c1550; DIED: Bruges, Belgium, 21 June 1632) *Belgian physician & mineralogist.*

Boodt was a member of a noble Roman Catholic family, and Anselmus seemed destined for a career in the administration of his native town. However, he elected to pursue a medical career and subsequently studied under Thomas Erastus [1523-1583] at Heidelberg and obtained his M.D. in Padua, Italy. He moved to Prague in 1583,



BOODT

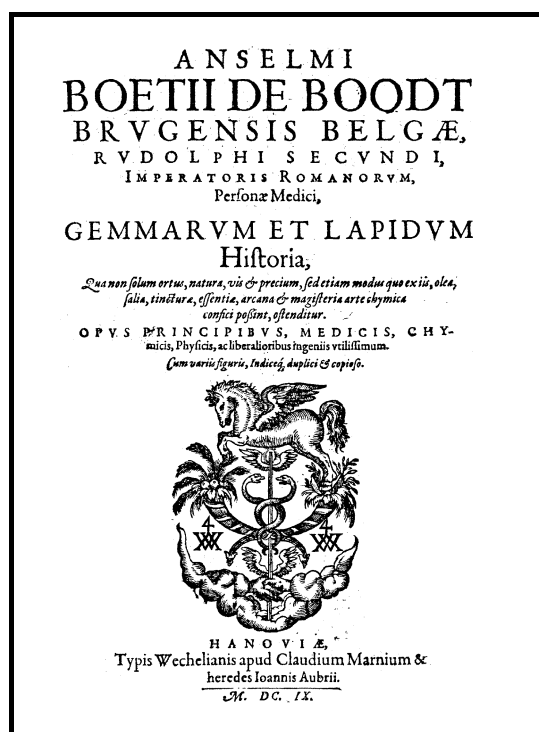
where he was physician to the burgrave. While living there, he became acquainted with the Bohemian naturalist Thadeus Hayek. Through this relationship, Boodt became intensely interested in nature, and he began to draw and paint flowers, animals and minerals. He also made many mineralogical trips in Bohemia, Silesia and Germany. From 1584 until 1595, Boodt held the post of canon of St. Donat's Church in his home town, even though he continued to live in Prague. In 1604, Rudolf II took him on as his personal physician. Boodt continued in this position until the emperor's death in 1612. Boodt then returned to Bruges, spending the remainder of his life as a town councillor. He never married and his relatives received all the physical property, including a collection of minerals.

REFERENCES: BAB: 81, 3-30. • *Catalogue of Portraits of Naturalists*: p. 347-8 [one portrait listed]. • Drugulin, *Sechstausend Portraits*, 1863: no. 559. • DSB: 2, 292-3 [by W. Hubicki]. • *ISIS*, 1913-65: 1, 172. • Lambrecht & Quenstedt, *Catalogus*, 1938: p. 47. • Maselis, Marie-Christiane., *The albums of Anselmus de Boodt (1550-1632). Natural history painting at the court of Rudolph II in Prague*. Tielt, Belgium, Lannoo, 1999. 212 p., 100 color plates. [Reproduces the original natural history drawings done by De Boodt, together with extensive biographical notes.]. • Poggendorff: 1, col. 236. • Sarjeant, *Geologists*, 1980: 2, 584-5 & Suppl. 1 (1986), 1, 300. • Thomas, *Dictionary of Biography*, 1884: p. 401. • WBI. • *World Who's Who in Science*: p. 426.

707. — Latin, 1609 [First edition].

Anselmi | Boetii De Boodt | Brvgensis Belgæ, | Rvdolphi Secvndi, | Imperatoris Romanorvm, | Personæ Medici, | Gemmarvm Et Lapivm | Historia, | Qua solum ortus, natura, vis & precium, sedetiam modus quo exiis, olea, | salia, sincturæ, essentia, arcana & magisteria arte chymica | consici possint, oftenditur. | Opvs Principibvs, Medicis, Chy- | micis, Physicis, ac liberalioribus ingeniis vtilissimum. | Cum variis figuris, Indiceq̃ duplici & copioso. | [ornament] Hanoviae, | Typis Wecheliani apud Claudium Marnium & | heredes Ioannis Aubrii. | [rule] M. DC. IX.

4°: †4 2†4 2†2 A-Z⁴ Aa-Mm⁴ Nn-Oo² Pp⁴; 165 ℓ .; [1]-[9], [11], [1]-294, [16] p. Woodcut portrait, 8 tables (2



GEMMARVM ET LAPIDVM HISTORIA, 1609

folding), woodcuts in the text, printer's woodcut device on title and at end. The folding tables, if present [see commentary], are bound in the text between pages 2/3 and 6/7. PAGE SIZE: 207 x 167 mm.

CONTENTS: [1-2], Title page, verso usually blank, but sometimes a portrait of De Boodt.; 3-[9], Dedication to D. Rvdolpho II, signed "Anselmvs Boetivs | de Boodt." [see commentary]; [3 pgs], "In | Commendationem Operis | Anselmi Boetii De Boodt | Brvgensis, de Lapidibus | Preciosis."; [2 pgs], "Ad Lectorem."; [6 pgs], "Catalogvs Lapidvm Omnivm | Qvorvm Mentio In Sequenti | libro sit."; 1-294, Text.; [15 pgs], "Index Rervm Et | Verborvm Memora- | bilivm."; [1 pg], Woodcut printer's device.

PLATES: In rare instances, a fine woodcut portrait of De Boodt is printed on the verso of the title page leave. The picture consists of an elaborate border with shields bearing family crests with the names printed above. This surrounds an oval frame that encloses a portrait of De Boodt's head, shoulders and chest. The wording on the frame is "Rvdolpho II. Roma. Imperatoris Medicvs Cvbicvlarivs. Anselmvs Boetivs De Boodt Brvgensis Belga I.V.L." The "n" in "Anselmvs" has been reversed. Underneath the frame is the wording, "Anagramma. Obstando sortiss casvs Delemvs acerbos. Hinc vni fidas, nam sic svmes Stabile Vno."

VERY SCARCE. *Gemmarvm et Lapidvm Historia* is one of the most important mineralogical works of the seventeenth century, marking a transition over previous lapidaries. It is of particular interest as a manual describing minerals that is more detailed, more extensive, more critical and more systematic than many earlier works. It was a well known and influential book, going through several editions and frequently being cited by other authors. A new era was marked with its publication. One in which the believes of the

past began to be challenged, and the researchers began to use hypothesis and experimentation to present new ideas. Above all, Boodt's work is an early example of a treatise on mineral substances that departs from a simple alphabetical arrangement in persenting its description of stones.

The work is divided into two books. Book one presents several general considerations relating to the properties of minerals. In book two, the major portion, are discussed over one hundred different mineral substances. For each kind, Boodt records the various names by which it is known, physical properties, occurrences, imitations, and the means of detecting imatations, uses emphasising medical prescriptions, and approximate cost. Contained within is an early attempt at the systematic description of minerals, with divisions of large and small, common and rare, soft and hard, flammable and nonflammable, transparent and opaque. Boodt notes the crystalline forms of some minerals as triangular, quadratic and heangular, and he provides critical references to earlier authors like Aristotle, Pliny and Parcaleus. Boodt was skeptical of the curative virtues of various gems. He suspected that it was coincidental that a specific type of gemstone was associated with a sick person who became well. Instead, he believed if stones had curative powers it was because they worked in concert with the body to affect a cure, not any supernatural property.

Discussing the properties of stones, Boodt gives a long discussion of hardness. He provides the earliest system of hardness grading for the various stones, which acted as a crude index to distinguish imatation gems from genuine. He distinguished three degrees of hardness and also included softness as a related but different property. Soft stones are considered such if fingers alone are sufficient to rub away the surface. Hard stones are called hard when they can neither be rubbed away with fingers nor cut by iron. Hard stones are classified under three categories: (1) a steel file can scratch the stone, (2) only the use of the Smyrna stone [emerald??] can cut the surface, and (3) those that can only be rubbed away with a diamond point.

Several states of the book appear to exist. In a descriptive bibliography, it is the writer's goal to provide details on the "ideal copy." That is the most complete copy that can be located. In this instance the volume described contains both the portrait and the two folding tables. This is indeed a rarity, and no single volume containing both has been found to examine. The description is a composite of two different books—one with a portrait, the other with tables. One could think that perhaps a volume with both the portait and tables does not exist; however, the German auction house of F. Zisska & R. Kistner in catalog 12/I for an auction held in October 1988 lists a De Boodt with both portrait and tables. This is undoubtedly a rare state. The more common state is where both the portrait and the tables are missing. Somewhere in between are copies with either the tables or the portrait, but not both. In addition, the publisher was apparently finding

and correcting errors in the text as the volume was produced. One copy found by Herbert Obodda, has the dedication signed "Anselmvs Boetivs | de Boodt," with the "t" and "d" swapped. Perhaps other states exist.

REFERENCES: Adams, *Origin and Nature of Ore Deposits*, 1934: 161-2. • Cobres, *Deliciae Cobresianae*, 1782: 2, 717 & 729. • Dana's 7th (Bibliography): 66. • *Freilich Sale Catalog*: no. 67. • Hiller, J.E., "Boèce de Boodt, précurseur de la minéralogie moderne - Boetius de Boodt. A turning point in the history of mineralogy," *Annales Guebhard-Severine*, 11 (1935), 73-81. • Hiller, J.E., "[Unknown]," *Fortschritte der Mineralogie, Krystallographie und Petrographie*, 17, 418-19. • Hiller, J.E., "[Unknown]," *Archeion*, 15 (1933), 348-68. • Hiller, J.E., "Die Mineraloge Anselmus Boetius de Boodts," *Quellen und Studien zur Geschichte der Naturwissenschaften*, 8 (1942), 1-215. ["Boetius de Boodts Leben und Werke," p. 4-11. "Register der in de Boodts 'Gemmarum et lapidum historia,' Ausgabe I und II, erwähnten Autoren," p. [204]-207.]. • Lambrecht & Quenstedt, *Catalogus*, 1938: p. 27. • LKG: XVI 198. • NLM 17th Century Books (Krivatsy): no. 1539. • Roller & Goodman, *Catalogue*, 1976: 1, 140. • Schröter's *Journal für die Liebhaber*: 1, 253. • Sinkankas, *Gemology Bibliography*, 1993: no. 778 [no portrait mentioned]. • Thorndike, *History of Magic*, 1923-58: 6, 318-24. • Wallerius, *Brevis Introductio*, 1779: 36. • Ward & Carozzi, *Geology Emerging*, 1984: no. 251. • Wellcome Catalog (Books): 1, no. 980.

708. 2nd edition, 1636: Gemmarvm | Et | Lapidum | Historia. | Quam | Olim edidit Anselmus Boetius de Boot | Brugensis, Rudolphi II. Impera- | toris Medicus. | Nunc vero | Recensuit, à mendis repurgavit, Commentariis, | & pluribus, melioribusque Figuris illustravit, | & multo locupletiore indice auxit, | Andrianus Toll Lugd.-Bat. M.D. | [ornament] | Lvgdvni Batavorvm, | Ex officina Joannis Maire. | c10 IO c XXXVI.

8°: (?)⁴ A-Z⁸ Aa-Nn⁸ Oo-Pp⁴ Qq³; 303ℓ.; [8], 1-576, [22] p., 2 folding tables, woodcuts in text. PAGE SIZE: 175 x 110 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pages], Dedication, dated c10IOc.XXXVI.; [3 pgs], "In Historiam | Gemmarum & Lapidum | Anselmi Boetii, | Editum nova cura clarissimi doctis- | simique viri | Adriani Toll, Medicinæ Doctoris, | ..."—signed Caspar Barlaeus [=poem].; 1-2, "Ad Lectorem."; 3-9, "Catalogus | Lapidum."; 10, "Catalogvs | Authorum."; 11-576, Text.; [21 pgs], "Index Rerum Et | Verborum Memora- | bilivm."; [1 pg], Blank.

VERY SCARCE. Edited, corrected and greatly enlarged by Andrian Toll [see note below].

Andrian Toll. (BORN: Leyden, Belgium, 1610; DIED: 1675) *Belgian physician.* Professor of medicine at the University of Leyden. He succumbed to an outbreak of the plague.

REFERENCES: Dana's 7th (Bibliography): 66. • *Freilich Sale Catalog*: no. 68. • Hoover Collection: no. 146. • LKG: XVI 198. • Roller & Goodman, *Catalogue*, 1976: 1, 140. • Schröter's *Journal für die Liebhaber*: 1, 253. • Sinkankas, *Gemology Bibliography*, 1993: no. 779. • Wellcome Catalog (Books): 1, no. 981. (Toll) Hirsch, *Biographisches Lexikon*, 1884-8: 5, 696.

709. 3rd edition, 1647: Gemmarum | Et | Lapidum | Historia. | Quam edidit Anselmus Boetius de Boot, | Brugensis, Rudolphi II. Impera- | toris Medicus. | Postea Adrianus Tollius, Lugd.-Bat., M.D., | [...3 lines of titles and memberships...] | Tertia Editio longe purgatissima. Cui accedunt Ioan- | nis de Laet, Antvverpiani, De Gemmis & La- | pidibus libri II. Et Theophrasti li- | ber De Lapidibus, Gr. & Lat. cum | brevibus notis. | [ornament] | Lugduni Batavorum, | Ex Officina Ioannis Maire. | c10 IO c XLVII.

[TITLE PAGE TO DE LAET'S WORK READS:]
Ioannis de Laet | Antvverpiani | De | Gemmis |

Et | Lapidibus | Libri Duo. | Quibus præmittitur | Theophrasti | Liber de Lapidibus | Græce & Latine | Cum | Brevibus Annotationibus. | [ornament] | Lugduni Batavorum. | Ex Officina Ioannis Maire. | Anno c10 IO c XLVII.

8°: (?)⁴ A-Oo⁸ Pp⁴ *5v does not connect. PAGE SIZE: 176 x 100 mm.

CONTENTS: [De Boodt's work:] [2 pgs], Title page, verso blank.; [3 pgs], Dedication, signed Ioannes Maire, August 1647.; [3 pgs], Poem, signed Caspar Barlaeus.; 1-2, "Ad Lectorem."; 3-9, "Catalogvs | Lapidum Omnium, quorum mentio in sequenti | libro fit."; 10, "Catalogvs | Authorum, | Quorum opera usus est Author | in hoc Libro."; 11-576, Text.; [22 pgs], "Index Rerum Et | Verborum Memo- | rabilium."; [2 pgs], Blanks.

[De Laet's work:] [2 pgs], Title page, verso blank. [5 pgs], "Index Capitum."; [1 pg], "Errata."; [46 pgs], "Theophrasti | De | Lapidibus."; 1-96, "Liber Primus | De | Gemmis Pellucidis | Et Semipellucidis."; 97-210, "Liber Secudus | De | Lapidibus."; [6 pgs], "Index | Præcipuarum Rerum Quæ In His Libris | Tractantur."

VERY SCARCE. Reprint of the 1636 Latin edition with the inclusion of a Latin translation of Theophrastus' Book on Stones by Johann de Laet [??-??].

Jan (Johan, Joannis) de Laet. (BORN: Antwerp, Belgium, 1582; DIED: Antwerp, Belgium, 15 December 1649) *Belgian.* Laet was born into a wealthy family and he therefore received a good education including languages. He published important early descriptions of the New World, as well as Spain, Italy, and Persia. He became one of the directors of the famous Compagnie des Indes (Dutch West-Indes Company).

REFERENCES: Brunet: 1, no. 1108. • Dana's 7th (Bibliography): 66. • *Freilich Sale Catalog*: no. 69. • (Laet) Dryander, *Catalogus Banks*, 1796-1800: 4, p. 6. • Roller & Goodman, *Catalogue*, 1976: 1, 140. • Sinkankas, *Gemology Bibliography*, 1993: no. 781. (Laet) Aa, *Biographisch Woordenboek*, 1852-78. • BAB: 385, 171-194. • Jacobs, J.A., "Johannes de Laet en de Nieuwe Wereld," *Jaarboek van het Centraal Bureau voor Genealogie*, 50 (1996), 108-30. • Poggendorff: 1, col. 1341. • WBI.

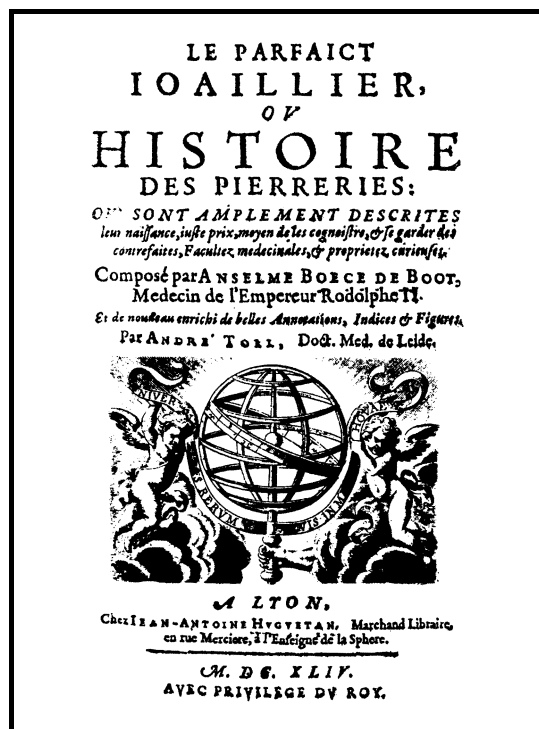
710. French transl., 1644: Le Parfait | Ioaillier, | Ov | Histoire | Des Pierrieres: | Ov Sont Amplement Descrites | leur naissance, iuste prix, moyen de les cognoistre, & se garder des | contrefaites, Facultez, medecinales, & propietez curieuses. | Composé par Anselme Boece de Boot, | Medecin de l'Empereur Rodolphe II. | Et de nouveau enrichi de belles Annotations, Indices & Figures. | Par André Toll, Doct. Med. de Leide. | [ornament] | A Lyon, | Chez Iean-Antoine Hvgvetan, Marchand Libraire, | en ruë Merciere, à l'Enseigne de la Sphere. | [rule] | M. DC. XLIV. | Avec Privilege Dv Roy.

8°: a7 ã8 A-Ccc8; 406ℓ.; [30], 1-746, [36] p., vignette on title, 2 folding tables, text woodcuts. Title page printed in red and black.

CONTENTS: [2 pg/=ã1rv], Title page, verso blank.; [5 pgs/=ã2r-ã4r], Dedication to Monsieur Gaspard De Moncans [=epistre].; [5 pgs/=ã4v-ã6v], "Preface Dv | Tradvctevr." [=advertisement].; [3 pgs/=ã7r-ẽ1r], Poem with text starting "In Historiam | Gemmarum & Lapidum | Anselmi Boetii, | ..."—signed Gaspar Barlaeus.; [11 pgs/=ẽ1v-ẽ6v], "Catalogve | De Tovtes Les | Pierres dont est faite mention | au Liure suivant."; [1 pg/=ẽ7r], "Catalogve Des | Autreurs qui souteitez en | ce Liure."; [3 pgs/=ẽ7v-ẽ8v], "Priuillege du Roy."; 1-746 (=A-Aaa6v), Text (Book 1, pp. 1-142, Book 2, pp. 143-746).; [34 pgs/=Aaa7r-Ccc7v], "Table | Generale Des | Matieres, ..."; [1 pg/=Ccc8r], "Erreurs sureueuënës à l'impression de ce Liure."; [1 pg/=Ccc8v], Blank.

RARE. Translation by Jean Bachou [??-??] from *Gemmarvm et Lapidvm Historia* (Lugduni Batavorum, 1636).

REFERENCES: Dana's 7th (Bibliography): 66. • Hoover Collection: no. 147. • LKG: XVI 200b. • Roller & Goodman, *Catalogue*, 1976: 1, 140. • Sinkankas, *Gemology*



LE PARFAICT IOAILLIER, 1644

Bibliography, 1993: no. 780.

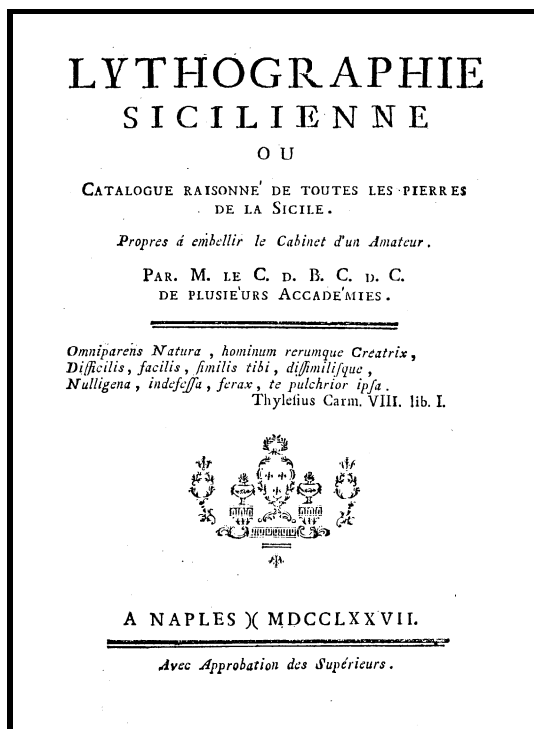
BORCH, Michał Jan, Comté de. (BORN: Warkland, Poland, 30 June 1753; DIED: Warkland, Poland, 10 January 1810) *Polish aristocrat.*

A member of the Polish nobility, Borch inherited land in the former province of Livland. He was named Polish governor of Lutzin, and held the military rank of commander of the Maltese Order. He was a member of many learned societies.

REFERENCES: *Catalogue of Portraits of Naturalists*: 202 [1 portrait listed]. • Gawel, A., "Memoriał Michała Borchy z roku 1780 jako pierwsza w Polsce próba geobiochemicznych poszukiwań kruszcowych," *Prace Muzeum Ziemi*, no. 8 (1966), 31-48. • Maślankiewicz, K., "Michał Jan Borch (1751-1810) and his activity in mineralogy and geochemistry," in: *Actes du XIe Congrès International d'Histoire des Sciences*, 4, Wrocław 1968, 284-86. • Orgelbranda, *Encyklopedia Powszechna*, 1898-1912: 2, 618-9. • PBA: *Polskie Archiwum Biograficzne*: 27, 401-405; S19, 407-417. • Poggendorff: 1, col. 237. • *Polski Słownik Biograficzny*: 2, 313-4 [by T. Turkowski]. • Sarjeant, *Geologists*, 1980: 2, 585. • Thomas, *Dictionary of Biography*, 1884. • WBI.

711. — French, 1777 [Collection catalog].

Lithographie | Sicilienne | Ou | Catalogue
raisonné de toutes les pierres | de la Sicile. |
Propres à embellir le Cabinet d'un Amateur. | Par
M. le C. d. B. C. d. C. | de plusieurs Accadé'mies.
| [double rule] | [...3 lines of quotation, signed Thylesius
Carm. VIII. lib. I...] | [ornament] | A Naples)(
MDCCLXXVII. | [double rule] | Avec Approbation
des Supérieurs.



LITHOGRAPHIE SICILIENNE, 1777

4°: π^2 b² A-M⁴ N²; 34ℓ.; [8], I-X, 1-50 p. PAGE
SIZE: 282 x 210 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs],
Dedication.: [1 pg], "Avis De L'Editeur."; [1 pg], Blank.;
[2 pgs], "Table | De Matie'res Conteneues Dans Ce |
Volume."; I-X, "Discours Preliminaire."; 1-49, Text.; 50,
"Errata."

VERY SCARCE. A catalog of the collection of
Sicilian stones and minerals Borch had accumulated,
and which he has arranged into four classes: hard
stones, semi-hard stones, soft stones, and miscellaneous.
Under these headings, he describes various jaspers,
agates, concretions, marbles, alabasters, dendrites, cave
minerals, basalts, granites, serpentines, fossils, and
quartz crystals. In his introduction Borch describes
the mineral richness of the island of Sicily, and gives
incidental information on other local topics such as the
currency, local language, methods of measurement, etc.

Italian edition, 1777: An Italian edition is listed in
a few early bibliographies as *Conte di Borch Litografia di
Sicilia*. Napoli, 1777. However, no modern trace of this
title as been found in any of the great libraries of Europe
or America.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54:
1, 326. • BL: [457.d.9.(1.)]. • LKG: XIV 684a. • NUC. •
Sinkankas, *Gemology Bibliography*, 1993: no. 783.

712. — French, 1778.

Lythologie | Sicilienne | Ou | Connaissance De
La Nature | Des Pierres De La Sicile | Suivie
D'Un Discours | Sur La Calcara De Palerme |
Par Monsieur | Le Comte De Borch | De Plusieurs

Accadémies | In arctum coacta rerum Naturæ majestas. | Plin. lib. 37. | [vignette] | À Rome | Chez Benoît Francesi | Avec Approbation Et Permission | [double rule] | MDCCLXXXVIII.

4°: π^4 b⁴ A-Z⁴ Aa-Dd⁴ Ee⁶; 122ℓ.; [i]-xvi, [1]-228 p. PAGE SIZE: 292 x 226 mm.

VERY SCARCE. Early treatise on the rocks of Sicily that is a continuation of the author's *Lithographie Sicilienne* (1778) and covering the same mineralogical subject. However, rather than being a catalog of specimens, Borch gives information on the deposits and quantities produced where the material occur.

Italian edition, 1778: An Italian edition is listed in a few early bibliographies as *Conte di Borch Litografia Siciliaa, o conoscenza della natura delle pietre della Sicilia sequita da un discorso sopra la Calcara di Palermo*. Roma, 1778. However, no modern trace of this title as been found in any of the great libraries of Europe or America.

REFERENCES: BL: [664.d.5.]. • LKG: XIV 685b & XIV 686c. • NUC: 66, 609 [NB 0646205]. • Sinkankas, *Gemology Bibliography*, 1993: no. 785.

713. German transl., 1781: *Sicilianische Lithologie oder Kenntniss der Natur der Steine in Sicilien mit einer Abhandlung über den Calcara von Palermo*.

8°:

EXTREMELY RARE. Apparently a German translation of *Lythologie Sicilienne* (1778). Listed in Dryander's catalog of the Bank's library and later the *British Library Catalogue* this book could not be found by the library in 2002. Unfortunately that was the only copy of this title traced.

REFERENCES: BL: [973.a.9.]. • Dryander, *Catalogus Banks*, 1796-1800: 4, ??.

714. — French, 1780.

Minéralogie | Sicilienne | Docimastique Et Métallurgique | Ou Connaissance De Tous Les Minéraux Que Produit L'Isle De Sicile, | Avec Les Détails Des Mines Et Des | Carrières, Et L'Histoire Des Travaux Anciens Et Actuels De Ce Pays. | Suivie De La | Minérhydrologie | Sicilienne | Ou La Descriptions De Toutes Les Eaux Minérales | De La Sicile | Par L'Auteur | De La Lythologie Sicilienne. | [Portrait medallion of the author's profile] | Turin 1780 | [double rule] | Chez Les Frères Reycends.

8°: *8 A-Q⁸ R⁴; 172ℓ.; LXXX, 264 p., 13 folding tables (I-III occur at page 240, while the remainder are at the end of the text). PAGE SIZE: 206 x 134 mm.

CONTENTS: [I-II], Title page, verso blank.; [III]-VIII, Dedication to Ferdinand I.; IX-XIV, "Préface.;" XV-XLIX, "Observations | Generales | Realatives A L'Histoire | De La | Minéralogie.;" L-LXXX, "Introduction.;" 1-230, Text (descriptions of minerals in a classification system); 231-248, "Minérhydrologie."

VERY SCARCE. Borch's third book on the subject of the minerals and stones of Sicily. Here he lists and briefly describes with locality information the same types of mineralogical objects, including agates, jaspers, concreations, granites, etc. A concluding section describes the mineral springs of the island.

REFERENCES: BL: [990.e.12.]. • LKG: XIV 687d. • NUC: 66, 609 [NB 0646207]. • Roller & Goodman, *Catalogue*, 1976: 1, 141. • Sinkankas, *Gemology Bibliography*, 1993: no. 787.

715. German transl., 1782: *Herrn Grafen von Borchs Sicilianische Mineralogie nach den Grundsätzen der Probierekunst und Metallurgie ... Mit einem Anhang der Sicilianischen Minerhydrologie, etc. ... 1782.*

8°:

EXTREMELY RARE. Apparently a German translation of *Minéralogie Sicilienne* (1780). Listed in Dryander's catalog of the Bank's library and later the *British Library Catalogue* this book could not be found by the library in 2002. Unfortunately that was the only copy of this title traced.

REFERENCES: BL: [973.a.10.]. • Dryander, *Catalogus Banks*, 1796-1800: 4, ??.

716. — French, 1782.

Lettres | Sur La Sicile | Et Sur | L'Isle De Malthe | De Monsieur | Le Comte De Borch | De Plusieurs Academies | A M. Le C. De N. | Écrites En 1777. Pour Servir De Supplément Au Voyage En Sicile | Et A Malthe De Monsieur Brydone | Ornées De La Carte De L'Etna, De Celle De La Sicile | Ancienne Et Moderne Avec 27. Estampes De Ce | Qu' Il Y A De Plus Remarkquable En Sicile. | [ornate rule] | Tome Premier. [-II.] | [ornate rule] | [Ornament incorporating a portrait medallion of the author's profile] | [rule] | A Turin 1782. | [ornate rule] | Chez Les Freres Reycends.

2 vols. [VOL 1] 8°: xix, [1], 236 p. [VOL 2] 8°:

VERY SCARCE. The published letters describing Borch's extensive trips through the islands of Sicily and Maltha. Because of the author's interest in mineralogy, he provides many vivid descriptions of his visits to geological formations and working mines.

REFERENCES: LKG: XIV 688e.

717. German transl., 1783: *Briefe über Sicilien und Maltha mit Charten vom Etna, von dem alten und neuen Sicilien, nebst 24 Kupferstichen von dem Grafen von Borch an H.G. von N. geschrieben im Jahr 1777 als ein Supplement zu der Reisbeschreibung von H. Brydone mit Karten vom Aetna, von dem alten und neuen Sizilien und 24 Kupfern*. Bern, bey der neuen typographischen Gesellschaft, 1783.

2 parts. [Part 1] 8°: [16], 198, [2] p., 3 maps, 4 plates. [Part 2] 8°: [4], 202 p., 20 plates.

RARE. Translated by Friedrich August Clemens Werthes [1748-1817] from *Lettres sur la Sicile et sur l'île de Malthe* (Turin, 1782).

REFERENCES: LKG: XIV 689f.

BORCH (Borrichius), Olaus. (BORN: Noerre Bork, in Ribe, Denmark, 7 April 1626; DIED: Copenhagen, Denmark, 13 October 1690) *Danish physician*.

Borrichius attended the schools of his home town before matriculating at the University of Copenhagen. Eventually he graduated with an M.D. from Angers. Starting in 1660 for six years he travelled and studied through Europe. Borch won fame as physician during a 1654 plague epidemic which led to his 1660 appointment as professor ordinary of philology, botany and chemistry. He became physician to the Royal household.

REFERENCES: *Catalogue of Portraits of Naturalists*: 202 [2 portraits listed]. • *Dansk Biografisk Haandleksikon*: 1, 191-2, portrait. • *Dansk Biografisk Lexikon*: 2, 356-7 [by H.D. Schepelrn]. • DBA: I 129, 16-20; II 157, 294. • Drugulin, *Sechstausend Portraits*, 1863: no. 572. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, ??, • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Koch, E.F., *Oluf Borch*. Copenhagen,

BOREL

1866. • Maar, V., *Mindeskraft for Oluf Borch paa 300-Aarsdagen for hans Fødsel*. Copenhagen, 1926. 146 p., illus. • Poggendorff: 1, cols. 243-4. • Thorndike, *History of Magic*, 1923-58. • WBI.

718. Dissertation, 1687: Olai | Borichi | Dissertatio | De | Lapidum Generatione | In Macro, & | Microcosmo. | Cui accessit | Additio | Exc: D. Doct: Joseph | Lanzoni | Med: Ferrariensis. | [ornament] | Ferrariæ 1687. | [ornate rule] | Typis Hyeronimj Filonj. | Svp: Perm:

12°: A-D¹²; 48ℓ.; [8], [1]-76, [12] p., index.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication.; [1 pg], Blank.; [3 pgs], "Ad Lectorem."; [1 pg], Blank.; [1]-76, Text.; [10 pgs], Index.; [1 pg], Imprimatur.; [1 pg], Blank.

RARE. A dissertation concerning stones found in nature and in the human body. The respondent was Giuseppe Lanzoni [see note below]. This work originally appeared in *Acta Medica*, 5 (1680), p. 184-96 but was then published as a separate work.

German transl., 177?: Friedrich August Cartheuser's *Vermischten Schriften*, Stuck 2, pp. 126-??.

Giuseppe Lanzoni. (BORN: Ferrara, Italy, 1663; DIED: Ferrara, Italy, 1730) *Italian physician*. Lanzoni was a professor at the University of Ferrara. He specialized in pathology and anatomy. He was a member of the Leopoldian-Carolina Academy.

REFERENCES: BL: [977.a.23.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 8. • LKG: XVI 90. • NUC: 66, 609-10 [NB 0646233]. • Partington, *History of Chemistry*, 1961-70: 3, 160. (Lanzoni) ABI: I 553, 147-164. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • Jöcher, *Gelehrten-Lexikon*, Supplement. • WBI.

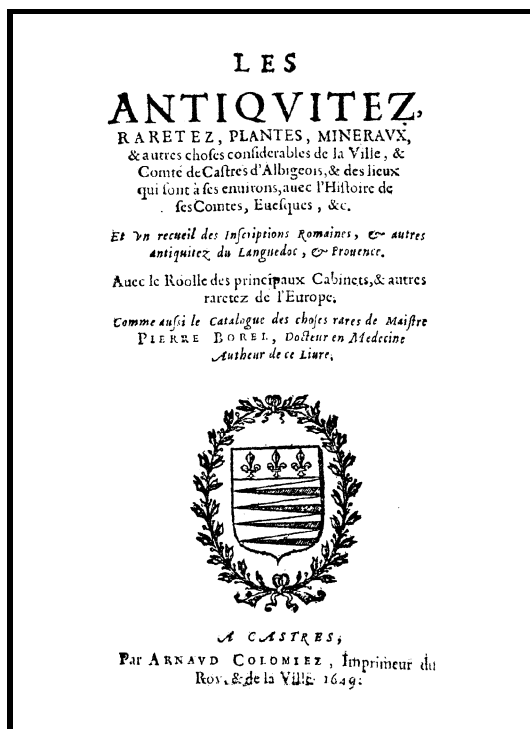
BOREL, Pierre. (BORN: Castres, Languedoc, France, 1620; DIED: Paris, France, 1689) *French physician, chemist & mineralogist*.

Borel studied medicine at Montpellier and opened a practice at Castres in 1641. In 1653 he went to Paris, where a year later he was appointed physician to the King. He actively studied throughout his life the fields of chemistry, optics, astronomy, philology and bibliography, and is known today for his writings on these subjects. Furthermore, he was an avid collector of all types of objects both natural and artificial, which during his lifetime he assembled into a large and varied cabinet. Borel was the first author to write a bibliography of chemistry *Bibliotheca Chimica* (Paris, 1653) and an early history of the telescope *De Vero Telescopii Inventore* (The Hague, 1656).

REFERENCES: ABF: I 127, 271-303. • Bonnafé, *Dictionnaire des Amateurs Français*, 1884. • DBF: 6, 1095 [by J. Boyer]. • DSB: 2, 305-6 [by E. Farber]. • Feller, *Biographie Universelle*, 1851. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 632. • Hoefer, *Histoire de la Chimie*, 1866-9. • Nicéron, R.P., "Pierre Borel", *Mémoires pour servir à l'histoire des hommes illustres dans la republique des lettres avec un catalogue resumé de leurs ouvrages*, 36 (1736), 218-24. • Poggendorff: 1, col. 240. • Puech-Milhau, M., "??," *Revue du Tarn, 4th Series*, 7 (1936), 279-80. • WBI.

719. — French, 1649 [First edition].

Les | Antiquitez, | Raretez, Plantes, Mineraux, | & autres choses considerables de la Ville, & | Comté de Castres d'Albigeois, & des lieux | qui sont à ses environs, avec l'Histoire de | ses Comtes, Euesques, &c. | Et un recueil des Inscriptions Romaines, & autres | antiquitez du Languedoc, & Prouence. | Avec le Roolle des principaux Cabinets, & autres | raretez de l'Europe. | Comme aussi le Catalogue des choses rares de Maistre | Pierre Borel, Docteur



LES ANTIQVITEZ, 1649

en Medecine | Autheur de ce Liure. | [ornament] | A Castres, | Par Arnavd Colomiez, Imprimeur du | Roy, & de la Ville, 1649.

2 parts in one volume. [Part 1] 8°: $\pi^4 \tilde{e}^4$ A-H⁴ (E1 signed D1); 40ℓ.; [16], 1-64 p.; [Part 2] 8°: π^4 I-Z⁴ Aa-Cc⁴ Dd³; 79ℓ.; [8], 1-150 p. Woodcut arms on title page, repeated on the first leaf of the second part.

CONTENTS: [Part 1] [2 pgs], Title page, verso blank.; [4 pgs], Dedication.; [2 pgs], "Av Lectevr."; [7 pgs], "In Musæum Petri Borelli D. | Medici, Castrensis."; [1 pg], "Table des Chapitres: du premier Liure."; 1-64, Text.

[Part 2] [1 pg], Sectional title page, "[ornament] | Les | Antiquitez, | Et Raretez, De | La Ville, Et Comté | De Castres D'Albigeois. | Livre Second."; [1 pg], Blank.; [4 pgs], "A Messievr."; [2 pgs], "Table des Chapitres du Livre second."; 1-149, Text.; 150, "Pseavme."

RARE. In part one of this work, Borel gives a history of Castres, France, his home town, which is a tract of considerable historical significance. Included are several chapters describing the minerals, flora and fauna of the surrounding area. Appended as the second part of the treatise is a catalog describing the contents of Borel's natural history cabinet that contained animals, plants, minerals, rarities, and musical and scientific instruments. Preceding the catalog is an 8 page list of other European museums and private collections arranged by city.

Ghost edition: The 1645 edition listed by some bibliographies is most likely a phantom.

Facsimile reprint, 1973: *Les antiquités de Castres, avec le rôle des principaux cabinets et autres raretés de l'Europe*. Genève, Minkoff Reprint, 1973. 8°: 64, [8], 150 p. [ISBN

2826601504.]

REFERENCES: BL: [576.b.28.]. • Brunet: 1, 1112-3. • *Cabinets de Curiosités*: no. 53. • *Freilich Sale Catalog*: no. 70. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 271.

720. — Latin, 1666.

Hortus seu armamentarium simplicium, mineralium, plantarum & animalium, ad artem medicam utilium. Cum brevi et accurata, iuxta celeberrimos autores, eorum etymologia, descriptione, loco, temperie & virgus ... Castres, Bernard Barcoudan, 1666

8°: [8], 384, [4] p., woodcut vignette of a basket of fruit on title. PAGE SIZE: 174 x 106 mm

RARE. First edition, rare, of Borel's last work, a catalogue of over 500 plants, minerals, animals, and other substances used in medicine. Each entry describes the plant etc., its habitat, its medical virtues, and other properties. There is at least one, and usually more than one citation of authorities ranging from Galen and Dioscorides to Fuchs and Mattioli.

REFERENCES: BL: [957.1.12.]. • NLM 17th Century Books (Krivatsy): 1575. • NUC.



BOŘICKÝ

BOŘICKÝ, Emanuel. (BORN: Millin, Pribram, Czech Republic, 12 December 1840; DIED: Prague, Czech Republic, 26 January 1881) *Czech mineralogist & geologist.*

Bořický was a specialist in igneous and metamorphic petrology, who studied the eruptive rocks of Bohemia. He was a professor of mineralogy at Karlovy University, Prague.

REFERENCES: *Bulletin de la Société Française de Minéralogie*: 3 (1881), p. 50-1. • *Casopis pro Mineralogii a Geologii*: 10 (1965), 477-8, portrait [by F. Fediuk]. • Czech National Library (NKC). • *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*: 1881, vol. 1, p. 1-2. • *Österreich Biographisches Lexikon*: 1, 102. • Poggendorff: 3, 164 & 4, 160. • Sarjeant, *Geologists*, 1980: 2, 585-6.

721. — Czech, 1872 [First edition].

Dra. A. Pokorného | názorný nerostopis. | [wavy rule] | Pro nižší oddělení středních škol československých | dle sedmého vydání | vzdělal | Dr. Em. Bořický, | professor na obecním reálném gymnasiu v Praze, a kustos Musea král. Čes. | [view showing a mine going into the stratified earth.] | Druhé rozmnožené a opravené vydání s 188 vyobrazeními. | [ornate rule] | V Praze 1872. | Nákladem Bedřicha Tempského.

8°: 126 p., 189 pictures mostly line drawings. RARE.

REFERENCES: Czech National Library (NKC).

722. 3rd edition, 1875: Dra. A. Pokorného názorný nerostopis. Pro nižší oddělení středních škol československých vzdělal Dr. Em. Bořický ... 3., rozmnožené a opr. vyd., V Praze, B. Tempský, 1875.

8°: 127 p., illus. RARE.

REFERENCES: Czech National Library (NKC).

723. Another edition, 1880: Dra. A. Pokorného | názorný nerostopis. | [wavy rule] | Pro nižší oddělení středních škol československých | vzdělal | Dr. Em. Bořický, | m. professor na universitě Pražské a kustos Musea král. Čes. | [vignette] | Krajina žulová (v Krkonoších). | Čtvrté rozmnožené a opravené vydání s 191 vyobrazeními a s jednou tabulí v barvotisku. | Cen 70 kr. | [ornate rule] | V Praze 1880. | Nákladem F. Tempského.

8°: RARE.

REFERENCES: Czech National Library (NKC).

724. — Czech, 1876.

Nerostopis | Pro | Vyšší Gymnasiální A Reální Školy | Sepsal | Dr Emanuel Bořický, | M. Professor Mineralogie Na Universitě Pražské. | [illustration of a geode half] | Druha krystalů v mandli achátové z melafýru Kozákovského. | S 543 výkresy na 402 obrázcích. | [ornate rule] | V Praze 1876. | Nákladem B. Tempského.

8°: 281 p., 543 pictures mostly draw lines. Bořický had as a teacher Prof. Jehlička, who he mentions in the preface. VERY SCARCE.

REFERENCES: Czech National Library (NKC).

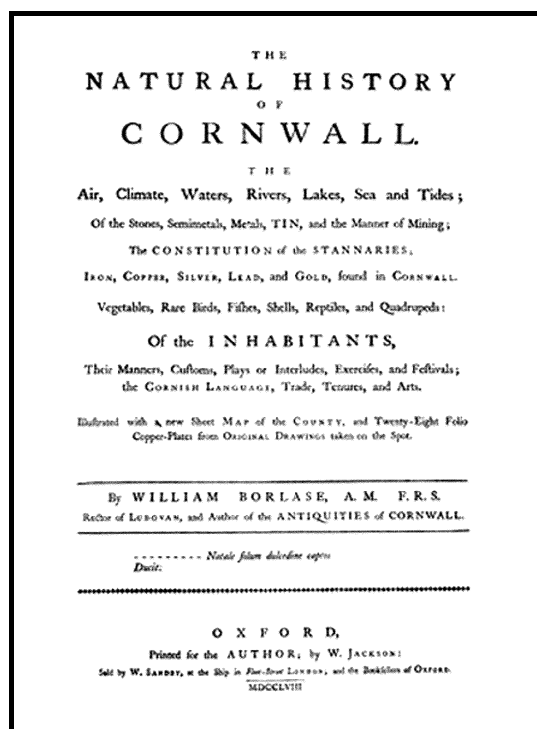
BORLASE, William. (BORN: Pendeen, Cornwall, England, 2 February 1695; DIED: Ludgvan, Cornwall, 31 August 1772) *English naturalist & antiquarian.*

Borlase was born to an ancient family which could trace its roots back to the early Normans. His ancestors had settled in the parish of St. Wenn, Cornwall, where they adopted the Cornish name of their place of residence. He was first educated at a school in Penzance, but was moved to Plymouth. In 1712, Borlase entered Exeter College, Oxford, from which in due course, he earned the degrees of B.A. and M.A. In 1719 he was ordained a deacon of the church and in 1720 a priest. He was given responsibility of the parish of Ludgvan, near Penzance, where he seems to have first paid attention to the natural history and prehistory antiquities of the area. For his papers on the subject, he was elected to the Royal Society in 1750. Borlase published *Antiquities of Cornwall* (1st ed., Oxford, 1754) that contained many pertinent observations of district with respect to early human habitation. As his next book, he published a much enlarged version of an earlier paper *Observations on the Ancient and Present State of the Islands of Scilly, and their Importance to the Trade of Great Britain* (Oxford, 1756). This was followed by the *Natural History of Cornwall* (Oxford, 1758), which is described below.

BORN

Eventually, Borlase presented to the Ashmolean Museum of Oxford the whole of his collections of antiquities, fossils and minerals, which had been described in these works. In recognition of this generosity, the university bestowed a doctor of laws degree on Borlase, on March 23, 1766. Seven years later, he died, in the fifty-second year as rector of his parish.

REFERENCES: BBA: I 126, 345-370; II 1321, 304. • DNB: 2, 860-1. • *Encyclopaedia Britannica*, 11th edition. • *Gentleman's Magazine*: 73, part 2, 1114-7. • Lambrecht & Quenstedt, *Catalogus*, 1938: 48. • *Literary Magazine*: 1756. • *Nichol's Literary Anecdotes*: 3, 78 & 689, 5, 291-303. • Poggendorff: 1, col. 242. • Pool, P.A.S., *William Borlase*. Truro, Royal Institution of Cornwall, x, 314 p.. • WBI.



THE NATURAL HISTORY OF CORNWALL, 1758

725. — English, 1758.

The | Natural History | Of | Cornwall. | The | Air, Climate, Waters, Rivers, Lakes, Sea and Tides; | Of the Stones, Semimetals, Metals, Tin, and the Manner of Mining; | The Constitution of the Stannaries; | Iron, Copper, Silver, Lead, and Gold, found in Cornwall. | Vegetables, Rare Birds, Fishes, Shells, Reptiles, and Quadrupeds: | Of the Inhabitants, | Their Manners, Customs, Plays or Interludes, Exercises, and Festivals; | the Cornish Langrage, Trade, Tenures, and Arts. | Illustrated with a new Sheet Map of the County, and Twenty-Eight Folio | Copper-Plates from Original Drawings taken on the Spot. | [rule] | By William Borlase, A.M. F.R.S. | Rector of Ludgvan,

and the Author of the Antiquities of Cornwall. | [rule] | - - - - - Natale solum dulcedine captos | Ducit. | [ornate rule] | Oxford, | Printed for the Author; by W. Jackson: | Sold by W. Sandby, at the Ship in the Fleet-Street London; and the Booksellers of Oxford. | [short rule] | MDCCLXVIII.

2^o: π^2 a-d² B-Oooo²; 174^l.; [i]-xix, [1], 1-326, [2] p., 28 plates, one map. PAGE SIZE: 340 x 215 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "To The | Nobility and Gentry | Of The | County of Cornwall, | ..."; vii-xii, "Some introductory Explanation of the Rise of the following | Treatise, ... | ... | To The | Candid Reader."; [xiii]-xvi, "A | List | Of | Subscribers."; xvii-xix, "A | Table of Contents."; [1 pg], Blank.; 1-326, Text.; [1 pg], "Errata."; [1 pg], "Directions | For Placing The Plates."

VERY SCARCE. In this work, Borlase takes a generally conventional view of the Creation and Deluge in his descriptions of the natural wonders of Cornwall. Within the description are included many references to the diverse mineralogy of the region. He describes the lay of the land, air, weather, ground waters, rivers and estuaries, lakes and the surrounding sea, the earths, including soils, clays, steatites, etc., sands, husbandry, stones, including quartz, agates, jaspers, ornamental, spars, rock crystal, etc., semi-metals, bismuth, petroleum, antimony, manganese, loadstone, cobalt, mineral deposits and veins, metals, particularly tin and copper, birds, insects, fish, reptiles, quadrupeds and inhabitants. The map shows the region of Cornwall, and the other 28 plates picture various scenic vistas, crystals, figured stones, mines, apparatus, corals, insects, fish, shells, reptiles, and ancient coins.

Supplement, 1864: *Additions to Borlase's Natural History of Cornwall*. Royal Institution of Cornwall, 1864. 8^o: 66 p., fold out facsimile illustration of Borlase's hand writing.

This is a 'Supplement' to Borlase's regional work and has been prepared 'From MS Annotations by the Author.'

Facsimile reprint, 1970: *The Natural History of Cornwall, 1758*. Facsimile Reprint. With an introduction by Dr F.A. Turk. Biographical Essay by P.A.S. Pool. Appendix of additions from MS annotations by the author for a proposed second edition. 2^o: xix, 326 p., 64 p., folding map, 28 plates. Limited to 350 copies.

REFERENCES: LKG: XIV 423. • Porter, *Making of Geology*, 1980. • Roller & Goodman, *Catalogue*, 1976: 1, 143. • Smith, *Early Mineralogy in Great Britain*, 1978.

BORN, Iganx Edler von. (BORN: Karlsburg, Transylvania [now Alba Iulia, Rumania], 1742; DIED: Vienna, Austria, 24 July 1791) *Austrian mineralogist & metallurgist*.

Von Born was born to a German noble family. He was sent to Vienna at the age of thirteen to study with the Jesuits; however, he quickly decided that the monastic life was not in his future. Instead he went to Prague to study law. After graduation, Von Born made an extensive tour throughout Germany, Holland and France. During this period, he was exposed to natural history, including mineralogy and mining. In 1770, he joined the department of mines and the mint. Among his first official duties was a tour of the mines of Hungary and Transylvania. At one location, he descended into a shaft to soon after the fires to detach the ore had been extinguished, and was exposed to a near fatal dose of arsenic rich vapors. This experience caused Von Born sickly health for the rest of his life, and forced him to persue passive activities such as



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his mineral collection. He was a dedicated Freemason and ardent anti-Jesuit. His work, *Specimen Monachologiae* (1st ed., Vienna, 1783) is a vicious attack against the Jesuit monks in which the various orders are classified according to a system modeled after Linneaus'. Perhaps this was revenge against his Jesuit experiences in Vienna when he was a youth.

REFERENCES: ADB: 3, 164. • Cleavelly, *World Palaeontological Collections*, 1983: 61. • Csíky, *Forerunners of Mining-Geology Mapping*, 1984. • DBA: I 127, 361-433; II 156, 392-400. • DBE: 2, 32. • Drugulin, *Sechstausend Portraits*, 1863: nos. 564-7. • DSB: 2, 315-6 [by J.B. Gough]. • Fettweis, G.B. and G. Hamann, eds., *Über Ignaz von Born und die Societät der Bergbaukunde. Vorträge einer Gedenkveranstaltung zur 200. Wiederkehr des Gründungstages im September 1786 der ältesten internationalen wissenschaftlichen Gesellschaft herausgegeben von Günter B. Fettweis und Günther Hamann*. Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1989. 153 p., illus., ports. [ISBN 3700116314]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 48. • NDB: 2, 466-7 [by G. Gugitz]. • Poggendorff: 1, cols. 242-3. • Sarjeant, *Geologists*, 1980: 2, 586 & Suppl. 1 (1985), 1, 302. • Thomas, *Dictionary of Biography*, 1884: 405. • WBI. • *World Who's Who in Science*: 1730.

726. — Latin, 1772-5 [Collection catalog].

[Contained within a compartment of an elaborate engraved border:] Index Fossilium | quæ collegit, et in Classes | ac Ordines disposuit | Ignatius S.R.I. Eques | a Born | Dominus in Altsiedlitz | Inchau, Tissa etc | S.C.R. Majest. in re | metallica et monetaria | a Consiidiis | Societatis Regiæ Holmensis | Socius. | [Within another compartment:] Praga apud Wolffgangum Gerle 1772.

[TITLE PAGE OF THE SECOND VOLUME READS:]

[Within a compartment of an elaborate engraved border:] Index Fossilium | quæ collegit, et in Classes | ac Ordines disposuit | Ignatius Eques a Born | Academiæ Cæsareæ Nat. Cur. | Londinensis, Holensis, Senensis, | Monacensis, Georg. Patavinæ, et Amicorum Nat. Scrut | Berolinensium Sodalit. | Pars altera. | [Within another compartment:] Praga



INDEX FOSSILUM, 1772

apud Wolffgangum Gerle 1775.

2 vols. [VOL 1: 1772] 8°: [16], [1]-157, [5] p., engraved title, several engraved vignettes, 3 folding engraved plates. [VOL 2: 1775] 8°: [8], [1]-148, [4], [2] errata p., engraved title, 3 engraved plates. PAGE SIZE: 197 x 116 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Lithophylacium Bornianum," verso blank.; [2 pgs], Title page, verso blank.; [1], "Societati Scientiarum."; [1 pg], Blank.; [4 pgs], "Societas Regia."; [6 pgs], "Ad Lectorem Minerologum!"; [1]-157, Text.; [5 pgs], "Nomina et Synonima Fossilium Huius Indicis Ordine Alphabetico."; [At end], 3 folding plates.

[Vol 2] [2 pgs], Half title page, "Lithophylacium Bornianum. Pars Altera," verso blank.; [2 pgs], Title page, verso blank.; [4 pgs], "Ad Lectorem Minerologum!"; 1-148, Text.; [3 pages], "Nomina et Synonima Fossilium Huius Indicis Ordine Alphabetico."; [1 pg], Blank.; [2 pgs], Errata.; [At end], 3 folding plates.

RARE. This is a comprehensive catalog of Von Born's own large mineral and fossil collection. It is sometimes called by its half title, *Lithophylacium Bornianum*, and is based on Cronstedt's system. The publication of the first volume, which contains many new mineral descriptions, brought Von Born much critical acclaim from European mineralogists, as well as recognition from the Royal Court of Austria. On the strength of this reception, the author continued in 1775 the catalog's publication with the issue of a second volume, describing other minerals and petrifications in his possession.

The plates of volume one numbered I-III show

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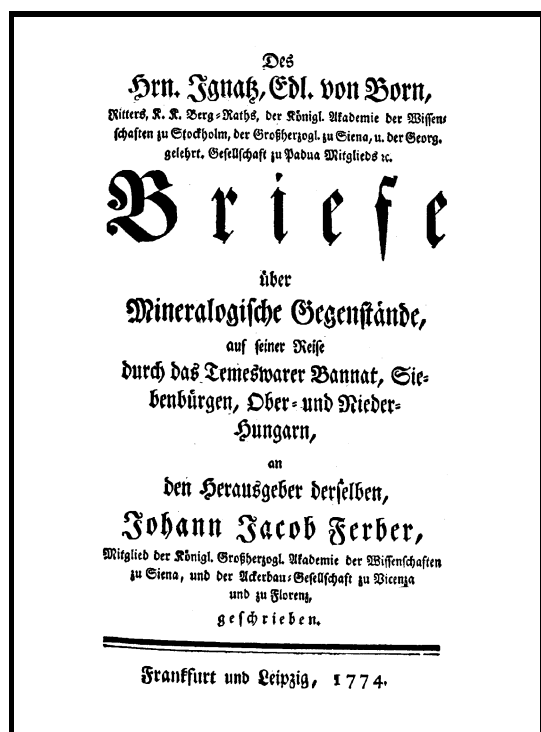
various figures of crystal clusters. The three plates of the second volume, also numbered I-III show crystal figures on the first plate, while the remainder figure various petrifications.

REFERENCES: Beckmann P.Ö.B.: 3, 590 & 6, 370. • Beekman, *Systematische Mineralogie*, 1906: 97-8. • *Berlinische Sammlungen*: 8, 666. • Cobres, *Deliciae Cobresianæ*, 1782: 1, 143-4. • Dana's 7th (Bibliography): 67. • Exrl. P.B.: 2, 250. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 265. • Hoover Collection: no. 151. • LKG: XV 24. • Partsch, *Katalog der Bibliothek*, 1851: no. 461. • Schröter's *Journal für die Liebhaber*: 6, 56. • Zittel, *History of Geology*, 1901: p. 41 & 445.

description of the people encountered as well as numerous interspersed accounts about the mineralogy and mining of the area. They also show Von Born to be an expert in his profession.

Ferber after having recieved the complete series of letters, decided their content should be shared with a wider audiance. Therefore, he undertook to edit them, and see to their publication as the present work. This volume was so well received that two translations [which see] were published.

REFERENCES: *Berlinische Sammlungen*: 9, 433-34. • *Freilich Sale Catalog*: no. 72. • LKG: VI 56 & XIV 842. • Roller & Goodman, *Catalogue*, 1976: 1, 143.



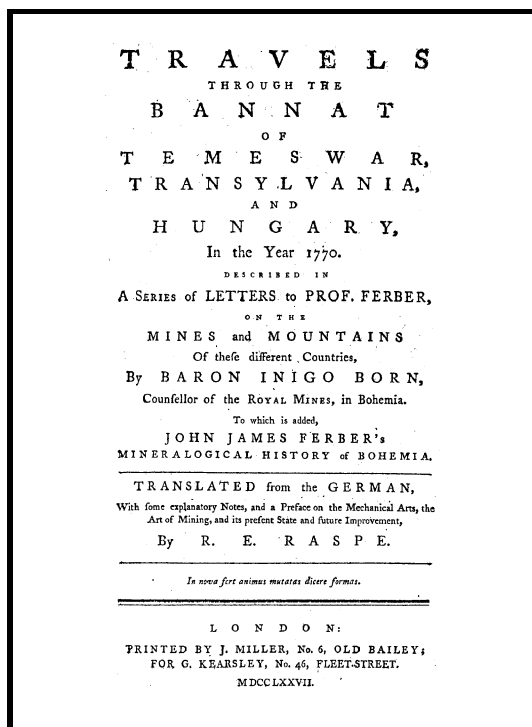
BRIEFE, 1774

727. Original edition, 1774: Des | Hrn. Ignatz, Edl. von Born, | [...3 lines of titles and memberships...] | Brie fe | über | Mineralogische Gegstände, | auf seiner Reise | durch das Temeswarer Bannat, Sie= | benbürgen, Ober= und Nieder= | Hungarn, | an | den Herausgeber derselben, | Johann Jacob Ferber, | [...3 lines of titles and memberships...] | geschrieben. | [double rule] | Frankfurt und Leipzig, 1774.

8°: A6 2A8 B-O8 P2; 120ℓ.; [12], [1]-228 p., 3 folding maps. PAGE SIZE: 200 x 120 mm.

CONTENTS: [2 pgs], Title page, verso 2 lines of quotation signed Young.; [4 pgs], Dedication, signed J.J. Ferber, 4 December 1773.; [6 pgs], "Inhalt.;" [1]-228, Text.; [At end], 3 folding maps.

SCARCE. In 1770, in his capacity as an official of the department of mines and the mint, Von Born made a lengthy tour through the southern realms of the Austrian Empire. At that time, this encompassed the mineral rich lands of Hungary and Transylvania. His keen observations of the regions he travelled through were recorded in a series of letters Von Born sent to the Swedish mineralogist JOHANN JACOB FERBER. These letters contain a vibrant, warm



TRAVELS, 1777

728. English transl., 1777: Travels | Through The | Bannat | Of | Temeswar, | Transylvania, | And | Hungary, | In the Year 1770. | Described In | A Series of Letters to Prof. Ferber, | On The | Mines and Mountains | Of these different Countries, | By Baron Inigo Born, | Counsellor of the Royal Mines, in Bohemia. | To which is added, | John James Ferber's | Mineralogical History of Bohemia. | [rule] | Translated from the German, | With some explanatory Notes, and a Preface on the Mechanical Arts, the | Art of Mining, and its present State and future Improvement, | By R.E. Raspe. | [rule] | In nova sert animus mutatas dicere formas. | [double rule] | London: | Printed By J. Miller, No. 6, Old Bailey; | For G. Kearsley, No. 46, Fleet-Street. | M DCC LXXVII.

8°: π2 a-b8 c8 B-Y8 Z8; 198ℓ.; [i]-xxxix, [13], 1-320, [24] p., 2 folding maps. PAGE SIZE: 212 x 127 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [i], "Cross Veins or Cross Joints ..."; [ii], Blank.; iii-xxxix, "Preface.;" [1 pg], Blank.; [10 pgs], "Appendix | To The | Preface, | Orological Tables | Of Some | Mines | Described In | Ferber's Letters | From | Italy, | And In This | Publication. | Those of the Mines at Joachimstal, in | Bohemia, to be compared with the Map."—followed by

9 tables.; 1-227, Text of 23 letters.; [228], Blank.; [229], "Abstract | Of | Mr. J.J. Ferber's | Mineralogical History | Of | Bohemia. | Published in German at Berlin, 1774."; [230], Blank.; 231-320, Text.; [22 pgs], "Index."

SCARCE. Translation by Rudolf Erich Raspe of *Briefe über Mineralogischer Gegenstände* (Frankfurt & Leipzig, 1774). This edition also contains a translation of Johann Jacob Ferber's *Beitrage zu der Mineral-Geschichte von Boehmen* (Berlin, 1774). The work by Von Born consists of a series of 23 letters addressed to Ferber describing the mining, geology and mineralogy he encountered on a trip through Hungary. Much of the text contain interesting observations on the production of copper, silver and gold. A map at page 84 shows Von Born's route through the territory. The last letter contains a valuable and interesting account of the various mineral collections visited during the trip. Ferber's text provides a mineralogical account of the region of Bohemia. Bound in at page 320 is a large folding map of the area with an indication of the various mining centers and geological features mentioned in the text.

Rudolph Erich Raspe. (BORN: Hannover, Germany, 1737; DIED: Muckcross, County Kerry, Ireland, 1794) *German geologist.* Raspe studied science and philology and worked as a librarian for several universities before fleeing to England in 1775 after pilfering some gems that were supposedly in his care. He worked at the Dolcoath Mine, Camborne, where he wrote his famous tale *The Surprising Adventures Of Baron Munchhausen* as well as discovering in St. Agnes a new tin-bearing sulphide, stannite. In 1791 he had to move again (to Ireland) after his involvement in a mining swindle in Scotland.

REFERENCES: LKG: XIV 843a. • NUC. • Roller & Goodman, *Catalogue*, 1976: I, 143. (Raspe) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 915, 143-152. • DBA: I 1000, 77-125; II 1043, 334-354. • DNB. • DSB: 11, 302-5. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 2, 384. • Lambrecht & Quenstedt, *Catalogus*, 1938: 352. • Poggendorff: 2, col. 572. • Sarjeant, *Geologists*, Suppl. 1, 1986: 2, 718, Suppl. 2 (1986), 2, 1010-1 & Suppl. 1 (1995), 3, 1948-9. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: 1396.

729. French transl., 1780: Voyage | Minéralogique | Fait En Hongrie Et En Transilvanie, | Par M. De Born, | Traduit de l'Allemand, avec quelques | notes, par M. Monnet, Inspecteur-
[...3 lines of titles and memberships...] | [ornament] | A Paris, | Rue Et Hostel Serpente. | [double rule] | M. DCC. LXXX. | Avec Approbation & Premission.

8^o: a⁸ χ² A-Q¹² R¹¹; 213ℓ.; [i]-xvj, [4], [1]-405, [1] p. PAGE SIZE: 168 x 92 mm.

CONTENTS: [i-ii], Half title page, "Voyage | Minéralogique," verso blank.; [iii-iv], Title page, verso blank.; [v]-x, "Avertissement | Du Traducteur."; [xi]-xvj, "Table | Des Lettres."; [4 pgs], "Approbation."; [1]-396, Text.; [397]-405, "Table | Des Matieres."; [1 pg], "Errata."

VERY SCARCE. Translation by ANTOINE GRIMOALD MONNET of *Briefe über Mineralogischer Gegenstände* (Frankfurt & Leipzig, 1774).

REFERENCES: Hoover Collection: no. 154. • LKG: XIV 844b.

Johann Gottlieb Kern vom Schneckensteine oder dem sächsischen Topasfelsen. Zum erstenmal herausgegeben und mit anmerkungen vermehrt, von Ignatz Edlen von Born ... (Prag, 1776).

See: Kern, Johann Gottlieb.

Lettre à M. le Chevalier De Born Sur La Tourmaline Du Tirol. Par M. Müller ... (Paris, 1779).

See: Müller Von Reichenstein, Franz Joseph, *Freiherr*.

730. Original edition, 1786: Ueber | Das | Anquicken | Der gold= und silberhältigen | Erze, Rohsteine, Schwarzkupfer und Hüttenpeise. | [short rule] | Von | Ignaz Edlen von Born, | [...5 lines of titles and memberships...] | [vignette] | [double rule] | Wien, bey Christian Friederich Wappler. | [short rule] | 1786.

VOYAGE MINÉRALOGIQUE

FAIT EN HONGRIE ET EN TRANSILVANIE,

PAR M. DE BORN,

Traduit de l'Allemand, avec quelques
notes, par M. MONNET, Inspecteur-
Général des Mines de France,
des Académies Royales des Sciences
de Stockholm, de Turin, &c. &c.



A PARIS,
RUE ET HOSTEL SERPENTE.

M. DCC. LXXX.
Avec Approbation & Permission.

VOYAGE MINÉRALOGIQUE, 1780

Ueber das Anquicken

der gold- und silberhältigen
Erze, Rohsteine, Schwarzkupfer und Hüttenpeise.

Von
Ignaz Edlen von Born,
bey H. R. Ritter, k. k. Hofrat bey der Hofkammer in Wien
und Vorgesetzter der k. k. Hofkammer der Statthalterei, und jetzt zu H. R. Vizepräsident der
k. k. Hofkammer der Statthalterei in Wien, k. k. Hofrat, k. k. Hofrath, k. k. Hofrath,
Zeuzer, Turin, und Sinesa, eine nach anderer geistigen Gesellschaften
Stellung.



Wien, bey Christian Friederich Wappler.
1786.

UEBER DAS ANQUICKEN, 1786

BORN

4°: [16], 227 p., 21 folding plates (designed by J. Frierer and engraved by J. Ziegler).

VERY SCARCE. Von Born invented an amalgamation process for extracting gold and silver from various ores. Since the process did not require the usual melting of the ore, it had considerable economic effect by not requiring any fuel. For his discovery, Von Born was given as a royalty a small percentage of the money saved where ever his process was used.

There is considerable information regarding the mining techniques used in Spanish America of the 16th century. Included are excerpts from the writings of Alvaro Alonso Barba [q.v.], José Acosta [?–?], among others.

REFERENCES: Hoover Collection: no. 153. • Roller & Goodman, *Catalogue*, 1976: 1, 143.

731. French transl., 1788: Méthode d'Extraire les Métaux parfaits des Minerais, et autres Substances Métalliques par le Mercure. Par M. de Born ... Vienne, Imp. de Gay, 1788.

8°: [4], 295 p., 21 folding plates.

VERY SCARCE. Translation of *Ueber das Anquicken der gold- und silberhaltigen Erze* (Vienna, 1786).

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: pp. 97-98. • Cobres, *Deliciae Cobresianæ*, 1782: pp. 73, 760, 764, 778, 781, 160. • Roller & Goodman, *Catalogue*, 1976: 1, 143. • Zittel, *History of Geology*, 1901: pp. 41 & 445.

732. English transl., 1791: Baron Inigo Born's New Process of Amalgamation of Gold and Silver Ores, and other Metallic Mixtures, as, by his late Imperial Majesty's Commands, Introduced in Hungary and Bohemia, from the Baron's Account in German, Translated into English by R.E. Raspe. With Twenty-Two Copper Plates. To which are added, a Supplement, of a Comparative View of the Former Method of Melting and Refining; and an Address to the Subscribers, giving an Account of the Latest Improvements, and of the Quicksilver Trade. London: Printed for T. Cadell, 1791.

4°: a-d⁴ e¹ B-Kk⁴; 145ℓ.; [i]-xxxiv, [1]-256 p., 22 plates (some folding). PAGE SIZE: 274 x 220 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "List of Subscribers."; [vii]-xxxiv, "An Address to the Subscribers."; [1]-158, Text.; [159]-179, "Reference to the Plates."; [180], Blank.; [181]-256, "Reports And Opinions"; [At end], 22 plates.

VERY SCARCE. Translation by RUDOLF ERICH RASPE of *Ueber das Anquicken der gold- und silberhaltigen Erze* (Wien, 1786). Pages 181-256 contain, "Reports and opinions on the advantages of amalgamation. Drawn up by some eminent miners and metallurgists, at their meeting, at Glasshutte, near Shemnitz, in 1786. Published by J.J. Ferber, at Leipzig and Vienna, 1787."

REFERENCES: Hoover Collection: no. 152. • Roller & Goodman, *Catalogue*, 1976: 1, 143.

733. — German, 1789-90 [Periodical?].

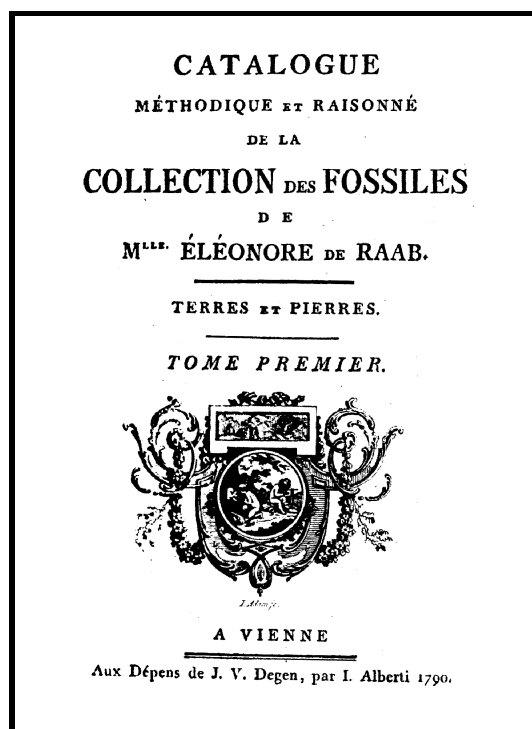
Bergbaukunde. [Edited by Ignaz von Born & Friedrich Wilhelm Heinrich von Trebra]. Leipzig: G.J. Göschen, 1789-90.

2 vols. [VOL 1] 4°: [8], 408, [12] p. [VOL 2] 4°: [4], 468, [4] p. Two fine & large mezzotint vignettes on titles, 13 folding engraved plates & maps, three folding printed tables, & one engraving in the text.

RARE. Co-edited by FRIEDRICH WILHELM HEINRICH VON TREBRA. In 1786 Born and Trebra were the founders of Szklono in Hungary of the Societät der Bergbaukunde, which had the purpose of increasing the knowledge in the areas of geology, mining, mineralogy, and metallurgy. It was an international scientific society and many of its members

were important names including von Heynitz, Lavoisier, Gmelin, Charpentier, Ferber, Poda, Hawkins, and Goethe. The *Bergbaukunde* was the first and only publication of the Society, which includes in the first part of volume one the plan and by-laws of the society. The remainder of the text contains numerous contributions on the mining activities and mineral resources of Germany, Hungary, France, England, Mexico, etc. The plates show various geological cross-sections, maps, illustrations of machinery, etc.

REFERENCES: BL: [457.a.24,25.]. • LKG: VI 95 & 96.



CATALOGUE MÉTHODIQUE, 1790

734. — French, 1790 [Trade issue].

Catalogue | Méthodique et Raisonné | de la | Collection des Fossiles | de M^{lle}. Éléonore de Raab. | [rule] | Terres et Pierres. | [rule] | Tome Premier [-Second]. | [ornament] | A Vienne | [double rule] | Aux Dépens de J.V. Degen, par I. Alberti 1790.

[TITLE PAGE OF VOLUME 2:]

Catalogue | ... | [rule] | Sels Minéraux; Bitumens Fossiles; | Substances Métalliques | [rule] | Tome Second. | ... | Aux Dépens de J.V. Degen, par I. Alberti 1790.

2 vols. [VOL 1] 8°: π⁷ a-b⁸ A-Z⁸ 2A-2H⁸ 2I³; 258ℓ.; [14], [1]-500, [2] p., 34 tables on 17ℓ. [VOL 2] 8°: π⁴ a-b⁸ A-Z⁸ 2A-2H⁸ 2I² 2K⁸ 2L-2N⁸ 2O¹; 284ℓ.; [8], [1]-499, [1], [66] p., 32 tables on 16ℓ. PAGE SIZE: 184 x 110 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank; [8 pgs], "Préface de l'Auteur."; [4], "Avis de l'Editeur."—signed J.V. Degen.; [1]-498, Text.; 499-500, "Explication de la Table du Premier Volume."; [501]-[502], "Fautes A Corriger."; [32 pgs], "Distribution Des Fossiles."

[Vol 2] [2 pgs], Title page, verso blank.; [6 pgs], "Préface de l'Auteur."; [1]-499, Text.; [500], Blank.; [10 pgs], "Fossiles, Dont l'Analyse A Étérapportée Dans Ce Catalogue."; [56 pgs], "Table Et Nomenclature Des Fossiles Et Produits Chimiques, Qui Se Trouvent Dans Ce Catalogue."; [32 pgs], Tables.

RARE. Edited by J.V. Degen [see note below]. From the editor's notes, it is learned that this book was privately printed for the friends and correspondents of Von Born, and limited to a total printing of 70 copies. Von Born was commissioned to prepare a catalog of the very fine mineral collection formed by Éléonore de Raab [see note below]. In the preface to the first volume, Von Born notes that this collection is one of the most complete of its kind. The specimens are described both by their exterior characteristics following Werner and by their chemical compositions in accordance with the theories of Lavoisier, Morveau, Fourcroy and Berthollet. Besides the typical information for each specimen described, the author includes many notes, comments, and references, showing that he was one of the ablest mineralogists of his day.

Jakob V. Degen. (BORN: Liedertswil, Switzerland, 1756; DIED: Vienna, Austria, 28 August 1848) *Austrian publisher.*

BIOGRAPHY NEEDED

Éléonore De Raab. *Austrian mineral collector.* (fl. 1790's) De Raab was the daughter of Franz Anton Ritter von Raab. She married the Spanish Ambassador della Huerta, and is sometimes referred to by early author's as "Frau von Uberta." De Raab owned a collection of about 2,500 small choice mineral specimens many of which had been given her by Von Born. In 1791 and 1792, De Raab purchased a suite of 41 mostly Cornish specimens from the English collector PHILIP RASHLEIGH. Eventually, De Raab's collection was acquired by the banker and art collector Count Moritz Christian Friess [1777-1826] of Vienna. In 1824, the Fries mineral collection was auctioned with the prominent buyer being Ferdinand Zimmerman, a professor at the Medicinisch-Chirurgische Josephs-Akademie.

REFERENCES: Dana's 7th (Bibliography): 67. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 49. • LKG: XV 25a. • Roller & Goodman, *Catalogue*, 1976: 1, 143. • Sinkankas, *Gemology Bibliography*, 1993: no. 794. • Wilson, *History of Mineral Collecting*, 1994: 47, 171 & 188-89. (Degen) ADB. • DBA: I 225, 336-339; II 257, 183-193. • Knoll, *Österreichische Naturforscher*, 1957: 187-9, portait [by E. Kurz-Runtscheiner]. • NDB. • Poggendorff: 1, col. 535?. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91. (De Raab) Mummert, P.A., "Women in Mineral History. Let's Set the Record Straight!", *Matrix*, 8 (2000), 32-5. • Wilson, *History of Mineral Collecting*, 1994: 188.

735. — French, 1790 [Presentation issue].

Catalogue | Méthodique et Raisonné | de la | Collection des Fossiles | de M^{lle} Éléonore de Raab. | [rule] | Terres et Pierres. | [rule] | Tome Premier [-Second]. | [ornament] | A Vienne | [double rule] | Aux Dépens de J.V. Degen, par I. Alberti 1790.

[TITLE PAGE OF VOLUME 2:]

Catalogue | ... | [rule] | Sels Minéraux; Bitumens Fossiles; | Substances Métalliques | [rule] | Tome Second. | ... | Aux Dépens de J.V. Degen, par I. Alberti 1790.

[SECTIONAL TITLE PAGE:]

Tome Premier | Seconde Partie.

[SECTIONAL TITLE PAGE:]

Tome Second | Seconde Partie.

2 vols. bound in 4. [VOL 1, pt. 1] 8°: [14], [1]-240 p.; [VOL 1, pt. 2] 8°: [2], 241-500, [2] p., one plate (numbered Tab 1; shows crystal drawings); [VOL 2, pt. 1] 8°: [8], [1]-232 p., 32 tables on 16l.; [VOL 2, pt. 2] 8°: [2], [233]-499, [1] blank, [66] p. PAGE SIZE: 227 x 138 mm.

CONTENTS: [Vol 1, pt. 1] [2 pgs], Title page, verso blank; [8 pgs], "Préface de l'Auteur."; [4], "Avis de l'Editeur."—signed J.V. Degen.; [1]-240, Text.; One plate.

[Vol 1, pt. 2] [2 pgs], Sectional title page, verso blank.; 241-498, Text.; 499-500, "Explication de la Table du Premier Volume."; [501]-[502], "Fautes a Corriger."; [32 pgs], "Distribution des Fossiles."

[Vol 2, pt. 1] [2 pgs], Title page, verso blank.; [6 pages], "Préface de l'Auteur."; [32 pgs], Tables.; [1]-232, Text.

[Vol 2, pt. 2] [2 pgs], Sectional title page, verso blank.; [233]-499, Text.; [500], Blank.; [10 pgs], "Fossiles, dont l'analyse a étérapportée dans ce catalogue."; [56 pgs], "Table et Nomenclature des Fossiles et Produits Chimiques, qui se Trouvent dans ce Catalogue."

VERY RARE. This is a special presentation issue of *Catalogue Méthodique et Raisonné*. It consists of the same text printed on a thicker, higher quality paper, which has been cut to a larger size and bound into four volumes. Sectional title pages have been added to the two additional volumes. The copy examined is inscribed on the title page by Born with the indication that this was the thirteenth example. No record has been found as to how many of these presentation copies were created.

REFERENCES: Dana's 7th (Bibliography): 67. • LKG: XV 25a. • Partsch, *Katalog der Bibliothek*, 1851: no. 462 ["2 Tomes en 4 Volumes"]. • Sinkankas, *Gemology Bibliography*, 1993: no. 794. • Wilson, *History of Mineral Collecting*, 1994: 47, 171 & 188-89.

736. — German, 1791.

Catalogus Bibliothecæ Bornianæ publica auctione vendetur die 10 November 1791 ... In der Spiegelgasse ... Vienna, 1791.

Small 8°: [2], [1]-109, [4] p.

VERY RARE. Auction sale catalog of the library of Von Born, very rich in chemical, alchemical and mineralogical works.

REFERENCES: *Weil Catalogs*: 32, no. 14.

Abhandlungen einer Privatgesellschaft in Böhmen, zur Aufnahme der Mathematik, der vaterländischen Geschichte, und der Naturgeschichte. Zum Druck befördert von Ignaz Edlen von Born. (Prag, 1775-84).

See: *Privatgesellschaft*.

BORSON, (Étienne) Stefano. (BORN: St. Pietro d'Albigni, Savoy, Italy, 19 October 1758; DIED: Turin, Italy, 25 December 1832) *Italian cleric & naturalist.*

BORSON

Borson was an Abate and professor of mineralogy at the University of Turin. He also held membership in the Scientific Academy of the city.

REFERENCES: ABI: I 189, 278-284. • *Biographie Universelle*. • *Dizionario Biografico Italiani*: 13, ?? . • Lambrecht & Quenstedt, *Catalogus*, 1938: 48. • *Torino, Memorie della Reale Accademia delle Scienze*: 37 (1834), ?? . • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, col. 244. • Vegezzi, G., *Nécrologie de M. Étienne Borson, Professeur de Minéralogie à Turin*, 1832. 4 p. • WBI.

737. — French, 1806.

Substances Minérales exploitées dans les Départemens du Piémont et Employées aux Usages des Manufactures des Arts. Échantillons tirés du Musée d'Histoire Naturelle de Turin et Envoyés à Paris pour l'Exposition du Mois de Mai 1806 par le Grand Conseil d'Administration de l'Université de Turin. (Catalogue rédigé par É. Borson.) Turin, Impr. de Bianco, 1806.

8°: 16 p.

VERY RARE. This work catalogs the mineral substances of economic importance found in the area of Piedmont together with descriptions of their uses in industry and art. As a source, Borson describes samples drawn from the large mineral collection of the Natural History Museum in Turin for which he was employed as curator. The text was prepared at the request of the administrators of the University of Turin for an exhibition held in Paris in May 1806.

REFERENCES: BL: [7002.e.1.(7.)]. • CBN. • LKG: XII 202. • NUC: [no copy listed].

738. — Italian, 1825.

Osservazioni Intorno alle Sostanze Minerali di cui sono Formati i Monumenti del Museo Egizio ... Torino, 1825.

4°: ?? p.

VERY RARE. These observations describe the mineral substances used in the creation of the artifacts, amulets, ornaments, jewelry, statuettes, etc. found in the Egyptian section of the University of Turin's collections.

REFERENCES: Murray, *Museums*, 1904: 3, 222. • NUC: [no copy listed].

739. — French, 1811 [Collection catalog].

Catalogue | Raisonné | Du | Musée D'Histoire Naturelle | De L'Académie De Turin. | Partie Minéralogique | selon le système de M.A. Brongniart | Par Étienne Borson, membre de l'Académie Italiano, | [...2 lines of titles and memberships...] | Tome Premier. | [tapered rule] | Turin, De L'Imprimerie De Vincent Masco | Au Palais De L'Académie. | 1811.

8°: [i]-xiv, [1]-314, [2] p.

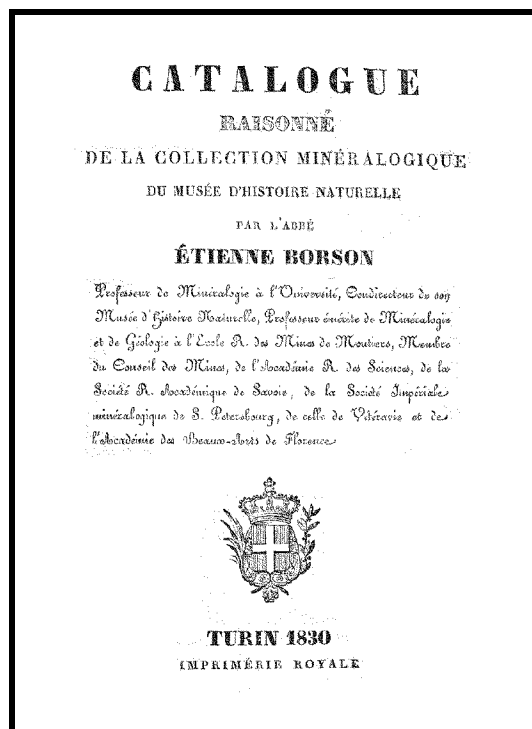
VERY RARE. No more published. First catalog of the large mineral collection accumulated by the Museum of Natural History at Torino, Italy [see note below]. Borson writes in the historical introduction that

he originally planned the classification of the minerals along the principles of Werner, but due to the progress of the science, he rearranged the collection according to the classification system of Brongniart. Other volumes were planned but none were published. The catalog was revised and completed in 1830, however [see next entry].

Turin (Torino), Italy. Museo Regionale di Scienze Naturali.

Italian museum. Founded 1730. The holdings of the mineral collection in Turin are the combination in 1800 of two earlier collections: (1) the University Natural History Museum (founded 1730) by Carlo Emanuele III, Duke of Savoy and King of Sardinia and (2) the Science Academy Museum (founded 1759). From 1805 until 1980 the mineralogical museum has been an autonomous institution operated by the University. In 1980, the collections have been the charge of the Piedmont Regional Council.

REFERENCES: Burchard, *Mineral Museums*, 1986: 160 [reproduces the title page]. • CBN. • Jonathan Hill, Bookseller: cat. 37, no. 40. • LKG: XV 53. • Murray, *Museums*, 1904: 3, 223. • NUC: [no copy listed]. (Turin (Torino), Italy. Museo Regionale di Scienze Naturali) Burchard, *Mineral Museums*, 1986: 160. • Petersen, *World Directory of Mineral Collections*, 1994: 155.



CATALOGUE RAISONNÉ, 1830

740. — French, 1830 [Collection catalog].

Catalogue | Raisonné | De La Collection Minéralogique | Du Musée D'Histoire Naturelle | Par L'Abbé Étienne Borson | [...7 lines of titles and memberships...] | [ornament] | Turin 1830 | Imperial Royale.

8°: [i]-xviii, [2], [1]-742 p.

VERY RARE. This work also appears to have been issued under the title: "Catalogue Raisonné de la Collection Minéralogique de l'Université Turin." It is a catalog of the large and important mineralogical collection of the Natural History Museum of Torino [see previous entry note]. The compiler had the duty of overseeing the collection and the responsibility for arranging the cabinet. In the preface he provides a short history of the collections formation. The classification chosen was based on the system of Brongniart.

REFERENCES: BL: [1255.e.9.]. • BMC: 1, 204. • CBN: [no copy listed]. • Jonathan Hill, Bookseller: cat. 18, no. 22. • NUC: [no copy listed].

741. — French, 1796.

Lettre à M. Allioni sur les Beaux Arts et en Particulier sur le Cabinet d'Antiquités et d'Histoire Naturelle de Msgr. le Cardinal Borgia à Velletri ... Etienne l'Abbé Borson ... Rome, 1796.

8°: 53 p.

VERY RARE. This letter addressed to CARLO ALLIONI describes the items in the cabinet of antiquities and natural history of Cardinal Borgia of Rome.

742. — Italian, 1820.

Saggio di orittografia Piemontese ... Stefano Borson ... Partie 1 ... Torino, 1820.

4°: VERY RARE.

Continuation, 1821: *Continuazione del saggio di orittografia piemontese letta nell'adunanza delli 20 maggio 1821* ... Continuazione 1. Torino, 1821. 4°: pp. 297-364, 2 plates.

Continuation, 1825: *Saggio di orittografia Piemontese* ... Continuazione 2. Torino, 1825. 4°.

BOSSI, Luigi. (BORN: Milan, Italy, February 1758; DIED: Milan, Italy, 10 April 1835) *Italian lawyer & scholar.*

Bossi was fluent in Greek, Hebrew, Latin and Italian. Besides the earth sciences, he wrote works on the history of the Catholic church and archaeology. He was a consultant on legal matters to the University of Pavia.

REFERENCES: ABI: I 192, 144-157; II 80, 25-26. • *Dizionario Biografico Italiani*: 13, 323-7. • *Naturalistas Italianos no Brasil* [Check at AzU]. • Poggendorff: 1, cols. 248-9. • WBI.

743. — Italian, 1819.

Dizionario | Portatile | Di | Geologia, Litologia E Mineralogia | Del Cavaliere | Luigi Bossi | Socio Di Varie Accademie | Con Otto Tavole In Rame | [tapered rule] | Milano | Presso Gio. Pietro Giegler, librajo, | Corsia de' Servi, num.° 603. | 1819.

12°: [i]-xvi, [1]-428, [2] p., 8 plates (numbered I-VIII; plate VI hand-colored). PAGE SIZE: 175 x 102 mm.

SCARCE. Standard dictionary of geology, lithology, and mineralogy, and defining terms used in these studies. References to information sources are provided.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 814.

BOUILLET, Jean Baptiste. (BORN: 1799; DIED: 1878) *French geologist & mineralogist.*

Bouillet was a banker at Clermont-Ferrand who self studied the geology and mineralogy around his city.

REFERENCES: Poggendorff: 1, col. 255.

Essai géologique et minéralogique sur les Environs d'Issoire, &c. (Clermont-Ferrand, 1827).

See: Devèze De Chabriol, J.s.

744. — French, 1828-9 [First edition].

Topographie Minéralogique du Département du Puy-de-Dôme. Suivie d'un Dictionnaire Oryctogonostique et d'un Tableau Synoptique des Hauteurs dun Grand Nombre de Montagnes, Villes et Villages du même Département. Ouvrage Couronné par l'Académie des Sciences, Belles-Lettres et Arts de Clermont-Ferrand, au concours de 1828. Clermont-Ferrand, Berthier, 1828-9.

8°: xii, 219 p., 2 plates. Published as: *Annales Scientifiques Académie des Sciences, Belles-Lettres et Arts*, Tomes I & II, 1828-29. VERY SCARCE.

REFERENCES: BL: [7104.bb.6.]. • BMC: 1, 212.

745. 2nd edition, 1854: *Topographie Minéralogique du Département du Puy-de-Dôme* ... par J.B. Bouillet ... 2 Édition. Clermont-Ferrand, Impr. de Hubler, Bayle et Dubos, 1854.

8°: [i]-vii, [1], [1]-242, [2] p. VERY SCARCE.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-vii, "Introduction."; [1 pg], Blank.; [1]-181, Text.; [182], Blank.; [183]-196, "Noms | Des Substances Minérales."; [197]-232, "Tableau | des | Hauters Au-Dessus Du Niveau De La Mer."; 233-242, "Tableau Comparatif Des Hauteurs."; [1 pg], "Table Des Matières."; [1 pg], Advertisements.

REFERENCES: BL: [no copy listed]. • BMC. • NUC.

746. — French, 1834.

Description Historique et Scientifique de la Haute-Auvergne. (Département du Cantal) suivie d'un Tableau Alphabétique des Roches et Minéraux du même Département, avec l'Indication de leurs Gisemens, et Accompagnée d'un Atlas de 35 Planches. Paris, J.B. Baillière, 1834.

2 vols. (text & atlas). [Text] 8°: viii, 439, (1) p.; [Atlas] 4°: 35 lithographed plates (11 hand-colored, many folded).

VERY SCARCE. This beautifully produced work largely describes the mineralogy and paleontology of upper Auvergne. Included in the numbering of the plates are 2 large folding maps. The attractive plates are drawn by the author and lithographed by Thibaud, most show mineralogical matter while others depict charming scenes.

Related work, c1834: *Coquilles Fossiles du Calcaire d'eau douce du Cantal Extrait de la Description Historique et Scientifique de la Haute-Auvergne.* Clermont-Ferrand, Imprimerie de Thibaud-Landriot, [c1834]. 16 p., 2 plates. This work on the fossil mollusks of central France was abstracted from the larger *Description Historique* (Paris, 1834).

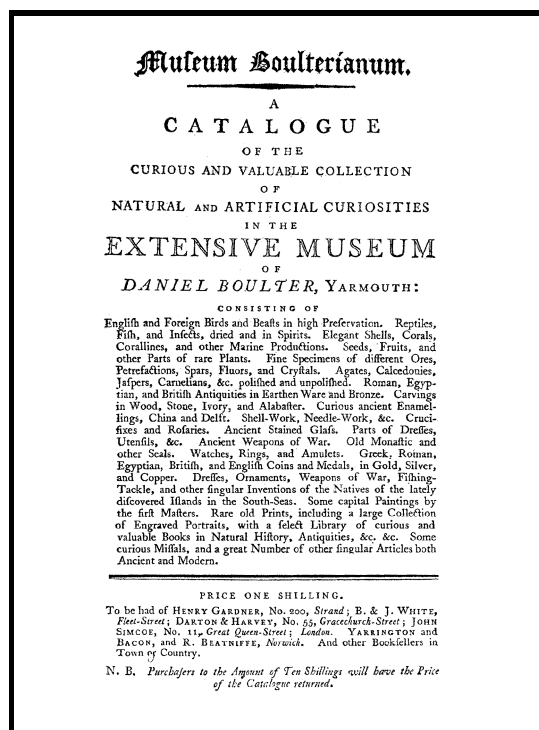
REFERENCES: BL: [576.i.17-18.]. • BMC: 1, 212. • Roller & Goodman, *Catalogue*, 1976: 1, 148.

BOURGEOIS

BOULTER, Daniel. (BORN: ; DIED:) *English merchant.*

Boulter was a merchant in Yarmouth dealing in silverware, jewelry, cutlery, toys, books, coins, medals, antiquities and natural curiosities including minerals. He built a personal collection that was open to the public for the admission price of one shilling. Murray (1904) incorrectly states he was a famous Quaker physician.

REFERENCES: Murray, *Museums*, 1904: 1, 184. • Wilson, *History of Mineral Collecting*, 1994.



MUSEUM BOULTERIANUM, 1793

747. — English, 1794 [Sale catalog].

Museum Boulterianum. | A | Catalogue | Of The | Curious And Valuable Collection | Of | Natural and Artificial Curiosities | In The | Extensive Museum | Of | Daniel Boulter, Yarmouth: | Consisting Of | English and Foreign Birds and Beasts in high Preservation. Reptiles, | Fish and Insects, dried and in Spirit. Elegant Shells, Corals, | Corallines, and other Marine Productions. Seeds, Fruits and | other Parts of rare Plants. Fine Specimens of differnt Ores, | Petrifications, Spars, Fluors, and Crystals. Agates, Calcedonies, | Jaspers, Carnelians, &c. polished and unpolished. Roman, Egyp- | tian, and British Antiquities in Earthen Ware and Bronze. Carvings | in Wood, Stone, Ivory and Alabaster. Curious ancient Enamel- | lings, China and Delft. Shell-Work, Neddle-Work, &c. Cruci-fixes and Rosaries.

Ancient Stained Glass. Pars of Dresses, | Utensils, &c. Ancient Weapons of War. Old Monastic and other Seals. Watches, Rings, and Amulets. Greek, Roman, | Egyptina, British, and English Coins and Medals, in Gold, Silver, | and Copper. Dresses, Ornaments, Weapons of War, Fishing- | Tackle, and other singular Inventions of the Natives of the lately | discovered Islands in the South-Seas. Some capital Paintings by | the first Masters. Rare old Prints, including a large Collection | of Engraved Portraits, with a select Library of curious and | valuable Books in Natural History, Antiquities, &c. &c. Some | curious Missals, and a great Number of other singlar Articles both | Ancient and Modern. | [double rule] | Price One Shilling. | To be had of Henry Gardner, No. 200, Strand; B. & J. White, | Fleet-Street; Darton & Harvey, No. 55, Gracechurch-Street; John | Simcoe, No. 11, Great Queen-Street; London. Yarrington and | Bacon, and R. Beatniffe, Norwich. And other Booksellers in | Town or Country. | N.B. Purchasers to the Amount of Ten Shillings will have the Price | of the Catalogue returned.

4°: A-X4; 84l.; [i]-vi, [1]-159, [1] p. Stiff covers. Printing on the covers reads: [Within an ornate oval border:] Daniel Boulter, | No. 19, Market-Place, Darmouth, | [...16 lines of additional text...]. PAGE SIZE: 204 x 122 mm.

CONTENTS: [i-ii], Title page, verso blank.; iii, "Advertisement."; iv, "Abbreviations Explained."; v-vi, "Index."; [1]-159, Text.; [1] pg], Blank.

VERY RARE. A fixed price sale of the collection of natural and artificial objects accumulated by Boulter. The contents include descriptions of birds, insects, reptiles, shells, minerals, antiquities, "singular inventions of the natives of the lately discovered islands in the south-seas," paintings of the masters, prints, books, and 11 lots of missals on vellum. Quartich in 1972 offered a copy: viii, 165 p. (ca. 1810).

REFERENCES: Wilson, *History of Mineral Collecting*, 1994: 206.

BOURGEOIS, Léon Zéphirin. (BORN: Paris, France, 26 August 1856; DIED:) *French mineralogist.*

Bourgeois was préparator of inorganic natural history for the Collège de France, 1880-3. In 1883, he became préparator of chemistry for the Muséum de Naturelle Histoire. He became professor of chemistry at the Polytechnique Institut in 1890. Bourgeois was among the first to artificially create minerals and igneous rocks.

REFERENCES: Poggendorff: 3, 173 & 4, 165. • *World Who's Who in Science*: p. 219.

748. — French, 1881.

Reproduction Artificielle des Minéraux. Paris, Dunod, 1884.

8°: [3], 240 p., 8 plates, illus.

RARE. This basic reference work on the synthesis of minerals, covers the history and methods, with

summaries of a very large number of experiments of minerals arranged by crystallochemical classes. It was published as the first "appendice" of tome 2, "Metalloides", which is part of a larger work *Encyclopédie Chimique* (5 v. in 3), published under the direction of M. Frémy. A short bibliography on the subject appears on pages 227-8.

REFERENCES: Dana's 7th (Bibliography): p. 67. • Margerie, *Bibliographies Géologiques*, 1896: no. 391.



BOURGUET

BOURGUET, Louis. (BORN: Nismes, France, 24 April 1678; DIED: Neufchatel, Switzerland, 31 December 1742) *French mineralogist.*

Bourguet was professor of philosophy and mathematics at the University of Neufchatel, Switzerland. He wrote a number of geological works.

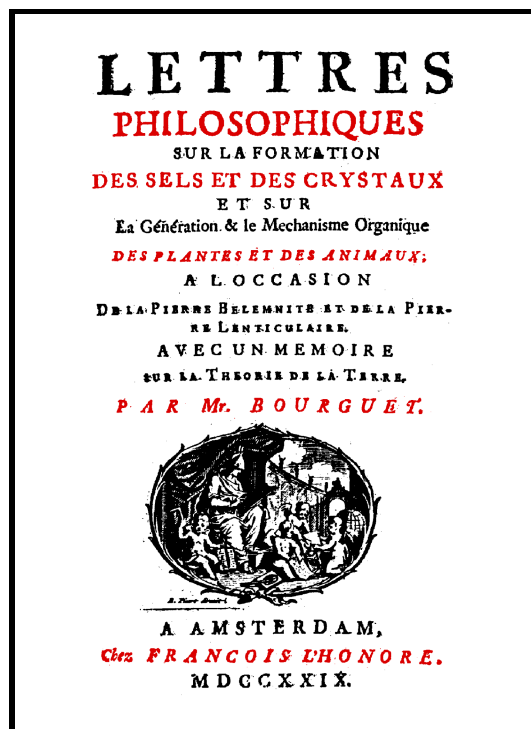
REFERENCES: ABF: I 142, 302-318. • *Biographie Universelle*. • Drugulin, *Sechstausend Portraits*, 1863: no. 594. • DSB: 15, 52-9 [by F. Ellenberger]. • *ISIS*, 1913-65: 1, 180. • *Nouvelle Biographie Générale* (Hofer). • Poggendorff: 1, col. 260-1. • Sarjeant, *Geologists*, 1980: 2, 594, Suppl. 1 (1985), 1, 305 & Suppl. 2 (1994), 1, 455. • WBI.

749. — French, 1729 [First edition].

[In black:] Lettres | [in red:] Philosophiques | [in black:] Sur La Formation | [in red:] Des Sels Et Des Crystaux | [in black:] Et Sur | La Génération & le Mechanisme Organique | [in red:] Des Plantes Et Des Animaux; | [in black:] A L'Occasion | De la Pierre Belemnite et de la Pierre Lenticulaire. | Avec Un Memoire | sur la Theorie de la Terre. | [in red:] Par Mr. Bourguet. | [ornament, signed B. Picert direxit.] | [in black:] A Amsterdam, | [in red:] Chez Francois L'Honore, | [in black:] MDCCXXIX.

12°: *10 A-I¹² K² L⁶; 138ℓ.; [i]-xliv, [1]-220, [12] p., one plate (folding; p. 172). Title in red and black. PAGE SIZE: 165 x 90 mm.

CONTENTS: [i-iii], Title page, verso blank.; [iii]-viii, Dedication, dated 5 March 1729.; [ix]-xliv, "Prefacé."; [1]-176, Text.; [177]-220, "Memoire | sur la | Theorie De La Terre."; [12 pgs], "Table." [=table of contents].



LETTRES PHILOSOPHIQUES, 1729

PLATES: The single folding engraved plate, 380 x 240 mm., bound in at page 172 shows crystal groups and fossils. It is signed A. De Putter scit.

VERY SCARCE. *Lettres Philosophiques* is an important publication that contributed several noteworthy observations to the sciences of biology and geology. Written as a series of four letters addressed to Johann Jacob Scheuchzer [q.v.], this volume touches upon many subjects of natural history. Included are theories on the formation of stalactites, the chronology of the earth, the generation of minerals and rocks, and the question of reproduction and development in living organisms. An additional tract titled "Memoire sur la theorie de la terre" considers numerous aspects of geological phenomena including the earth's destruction, which incorporates discussions of mechanical weathering, volcanism and earthquakes.

REFERENCES: Adams, *Birth and Development*, 1938: 129. • *Berlinische Sammlungen*: 9 (1775), 315-7. • Bork, K.B., "The Geological Insights of Louis Bourguet (1678-1742)," *Journal of the Scientific Laboratories, Denison University*: 55 (1974), 49-77: 55 (1974), 49-77. • Cobres, *Deliciae Cobresianæ*, 1782: 1, 200 & 2, 723. • DSB: 15, 52-9 [by F. Ellenberger]. • *Freilich Sale Catalog*: no. 77. • Hoover Collection: no. 158. • *Journal de Trevoux, ou Memoires pour l'histoire des sciences et des beaux arts*: Oct. 1730, pp. 1739-50. • Kobell, *Geschichte der Mineralogie*, 1864: 26-7. • LKG: XVII 137. • Metzger, *Genèse de la Science des Cristaux*, 1918. • Roller & Goodman, *Catalogue*, 1976: 1, 149. • Zittel, *History of Geology*, 1901: p. 21.

750. 2nd edition, 1762: [In black:] Lettres | Philosophiques | Sur La Formation | Des Sels Et Des Crystaux, | Et Sur La Generation | Et Le Mechanisme Organique | [in red:] Des

BOURNON

Plantes Et Des Animaux, | [in black:] A L'Occasion | De la Pierre Belemnite | [in red:] Et de la Pierre Lenticulaire. | [in black:] Avec Un Mémoire | [in red:] Sur La Theorie De La Terre. | [in black:] Par Mr. Bourguet. | Seconde Edition avec figures. | [ornament] | [in red:] A Amsterdam, | [in black:] Chez Marc-Michel Rey, | [in red:] MDCCLXII. 8°: *4 A-R⁸ S⁴; 153ℓ.; [i]-xxiv, [1]-270, [12] p., one plate (folding, p. 173). Title in red and black. PAGE SIZE: 155 x 97 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii-vi], Dedication to Antoine Vallinieri de Vallisnera, Bernardin Zandrini, and Joseph Monti.; [vii]-xxiv, "Prefacé."; [1]-212, Text.; 213-216, "Explication des Figures."; [217], "Memoire sur la Theorie de la Terre."; [218], Blank.; 219-270, Text of memoire.; [12 pgs], Table of contents.

PLATES: The folding engraved plate, 380 x 240 mm., is bound in at page 173. It shows 22 figures of fossils and crystals.

VERY SCARCE. Posthumous edition. This volume also contains the added memoire on the theory of the earth.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 389. • Hoover Collection: no. 159.

BOURNON, Jacques-Louis, Comte de. (BORN: Metz, France, 21 January 1751; DIED: Versailles, France, 24 August 1825) *French crystallographer & mineralogist.*

Bournon was born into a noble family. He turned his attention to the natural history studies particularly mineralogy. However, he lost his first mineral collection when he fled to England during the French Revolution, but he built a second collection there, which was later sold to the French King Louis XVIII with Bournon becoming the Director. This second collection consisted of 22,881 specimens, nearly half were single crystals. In 1825, the collection was divided between the College de France and the Jardine des Plantes (National Museum of Natural History).

REFERENCES: ABF: I 143, 218-221; II 92, 77. • Cleavelly, *World Palaeontological Collections*, 1983: 62. • DBF: 6, cols. 1524-6 [by T. de Morembert]. • DSB: 2, 355 [by J.G. Burke]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 51. • Poggendorff: 1, cols. 261-2. • Sarjeant, *Geologists*, 1980: 2, 594. • Thomas, *Dictionary of Biography*, 1884: 417. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 56-7 & 162.

751. — French, 1785 [First edition].

Essai | Sur | La Lithologie | Des Environs | De | Saint-Etienne-En-Forez, | Et Sur L'Origine De Ses Charbons De Pierre. | Avec des Observations sur les Silex, Pétro- | silex, Jaspes et Granits. | Par M. de Bournon, Lieutenans de MM. | [...2 lines of titles and memberships...] | [ornament] | [tapered rule] | 1785.

8°: [i]-xviii, [1]-104 p.

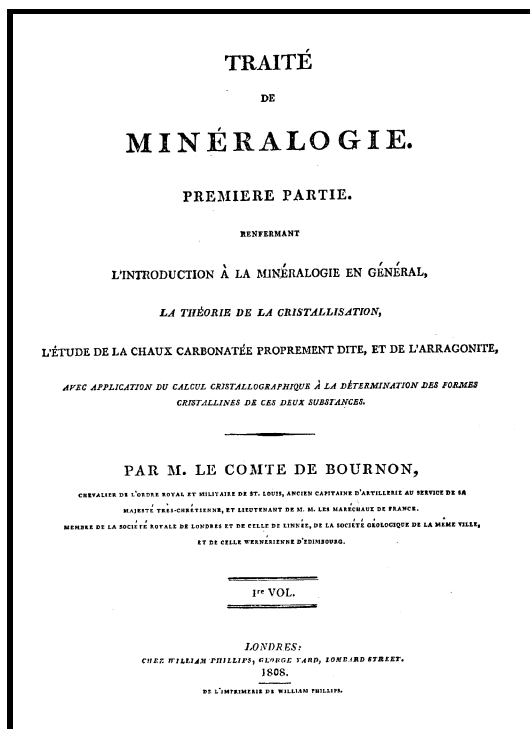
RARE. This monograph discusses petrology and the formations of coal found in the Saint-Etienne region of France.

Reissue, 1787: The text was apparently reissued with a Lyon imprint in 1787.

REFERENCES: BL: [987.i.16.]. • LKG: XIV 381.

752. — French, 1808 [First edition, issue A].

Traite | De | Minéralogie. | Premiere Partie. | Renfermant | L'Introduction À La Minéralogie En Générale, | La Théorie De La Cristallistion, | L'Étude De La Chaux Carbonatée Proprement Dite, Et De L'Arragonite, | Avec Application Du



TRAITE DE MINÉRALOGIE, 1808

Calcul Cristallographie À La Détermination Des Formes | Cristallines De Ces Deux Substances. | [tapered rule] | Par M. Le Comte De Bournon, | [...4 lines of titles and memberships...] | [double rule] | 1^{re} Vol. | [double rule] | Londres: | Chez William Phillips, George Yard, Lombard Street. | 1808. | [short rule] | De L'Imprimerie De William Phillips.

3 vols. [VOL 1] π^4 a-f⁴ A-Z⁴ 2A-2U⁴ 2X³; 203ℓ.; [8], [i]-xlvi, [1]-349, [1] p.; [VOL 2] π^4 A-Z⁴ 2A-2Z⁴ 3A-3E⁴ 3F²; 210ℓ.; [8], [1]-411, [1] p.; [VOL 3] π^1 A-B⁴ C² a-d² e¹ [plates]; 19ℓ.; [2], [1]-19, [1], [16] p., 72 plates mostly of crystal drawings. PAGE SIZE: 286 x 216 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], Dedication to Czar Alexandre I.; [3 pgs], "Table | Des Matières contenues dans le Premier Volume."; [1 pg], Errata.; [i]-xlvi, "Discours Préliminaire."; [1]-349, Text.; [1 pg], Blank.

[Vol 2] [2 pg], Title page, verso blank.; [4 pgs], "Table | Des Matières contenues dans le Second Volume."; [1 pg], Errata.; [1 pg], Blank.; [1]-411, Text.; [1 pg], Blank.

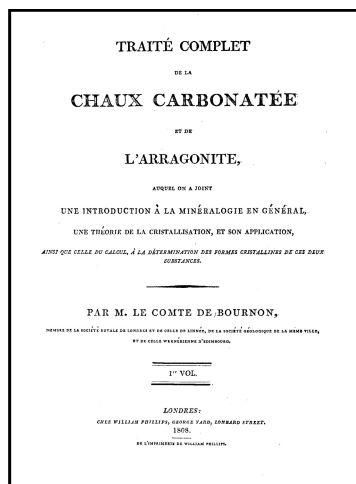
[Vol 3] [2 pgs], Title page, verso blank.; [1]-19, "Observations | Sur Les Planches qui Renferment La Série Des Cris- | taux De Chaux Carbonatée, Et Sur La Manière | De Faire Usage Du Tableau Des Modifications Du | Cristal Primitif De Cette Substance, Placé à Leur | Tête."; [1 pg], Blank.; [16 pgs], "Tableau Des Modifications Du Cristal Primitif De La Chaux | Carbonatée, Ainsi Que De Leurs Angles De Détermination."; [At end], 72 plates, mostly of crystal drawings.

VERY SCARCE. A three volume treatise concerning the properties and relationships of calcite and its structural isomorph, aragonite. To determine the

position de Bournon's work holds in the history of mineralogy, attention must first be focused on the last quarter of the eighteenth century. During this time, a controversy began concerning the relationship between the minerals calcite and aragonite. Although quantitative analysis proved them to be chemically identical, examination of their physical properties showed aragonite to be harder, heavier and to possess a different crystal form. Using these criteria Abraham Gottlob Werner named and classified aragonite as a separate entity from calcite. In 1801, the *Traite de Mineralogie* by Rene Just Haüy also listed aragonite as a separate species, although the French mineralogist admitted more research was needed. This statement produced a flurry of investigations and theories to resolve the aragonite–calcite dilemma.

The present work, de Bournon's most important mineralogical contribution, was written to support Haüy's position that calcite and aragonite were separate mineral species, and that the final determination of whether a mineral is a distinct species relies on physical characteristics, not chemical properties. The seventy-two plates show various crystals of calcite and aragonite. Based on a copy of this work that had loosely laid in the two leaves of the *Traité Complet de la Chaux Carbonatée et de l'Arragonite* the *Traité de Minéralogie* is the first issue.

REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: 127-28. • Dana's 7th (Bibliography): 67. • Roller & Goodman, *Catalogue*, 1976: 1, 150. • Smith, *100 Years of the Mineral Collection*, 1969: 239-40.



TRAITÉ COMPLET, 1808

753. First edition, issue B, 1808: *Traité Complet* | De La | Chaux Carbonatée | Et De | L'Arragonite, | Auquel On A Joint | Une Introduction À La Minéralogie En Général, | Une Théorie De La Cristallisation, Et Son Application, | Ainsi Qui Celle Du Calcul, À La Détermination Des Formes Cristallines De Ces Deux | Substances. | [tapered rule] | Par M. Le Comte De Bournon, | [...2 lines of titles and memberships...] | [double rule] | 1^{re} Vol. | [double rule] | Londres: | Chez William Phillips, George Yard, Lombard Street. | 1808. | [short rule] | De L'Imprimerie De William Phillips.

3 vols. [VOL 1] π^4 a-f⁴ A-Z⁴ 2A-2U⁴ 2X³; 203ℓ.; [8], [i]-xlviii, [1]-349, [1] p.; [VOL 2] π^4 A-Z⁴ 2A-2Z⁴ 3A-3E⁴ 3F²; 210ℓ.; [8], [1]-411, [1] p.; [VOL 3] π^1 A-B⁴ C² a-d² e¹ [plates]; 19ℓ.; [2], [1]-19, [1], [16] p., 72 plates mostly of crystal drawings. PAGE SIZE: 284 x 214 mm.

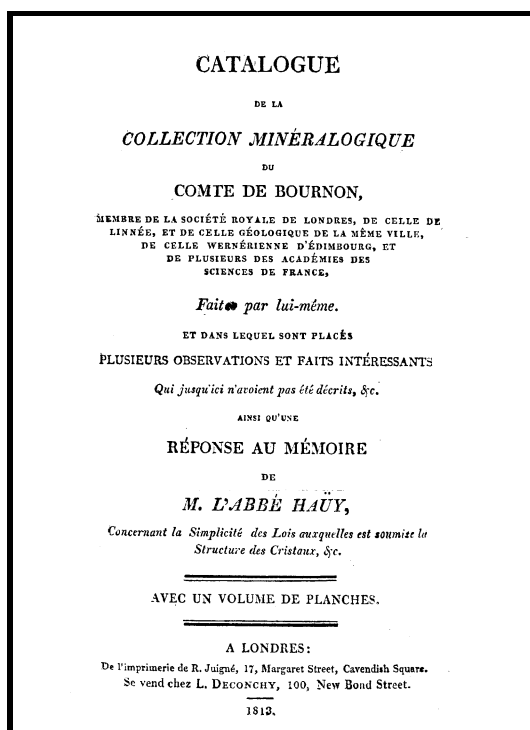
CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [1 pg], "Avertissement."; [1 pg], Blank.; [3 pgs], "Table | Des Matières contenues dans le Premier Volume."; [1 pg], Errata.; [1 pg], Blank.; [i]-xlviii, "Discours Préliminaire."; [1]-349, Text.; [1 pg], Blank.

[Vol 2] [2 pg], Title page, verso blank.; [3 pgs], "Table | Des Matières contenues dans le Second Volume."; [1 pg], Errata.; [1]-411, Text.; [1 pg], Blank.

[Vol 3] [2 pgs], Title page, verso blank.; [1]-19, "Observations | Sur Les Planches qui Renferment La Série Des Cris- | taux De Chaux Carbonatée, Et Sur La Manière | De Faire Usage Du Tableau Des Modifications Du | Cristal Primitif De Cette Substance, Placé à Leur | Tête."; [1 pg], Blank.; [16 pgs], "Tableau Des Modifications Du Cristal Primitif De La Chaux | Carbonatée, Ainsi Que De Leurs Angles De Détermination."; [At end], 72 plates, mostly of crystal drawings.

VERY SCARCE. Identical in all respects to the previous issue, except for the different title pages of each volume.

REFERENCES: BL. • Burke, *Origins of the Science of Crystals*, 1966: 127-28. • Smith, *100 Years of the Mineral Collection*, 1969: 239-40.



CATALOGUE, 1813

754. — French, 1813 [Collection catalog].

Catalogue | De La | Collection Minéralogique | Du | Comte De Bournon, | [...5 lines of titles and memberships...] | Faites par lui-même. | Et Dans Lequel Sont Placés | Plusieurs Observations Et Faits Intéressants | Qui jusqu'ici n'avoient pas

BOURNON

été décrits, &c. | Ainsi Qu'une | Réponse Au
Mémoire | De | M. L'Abbé Haüy, | [...2 lines of
titles and memberships...] | [double rule] | Avec Un
Volume De Planches. | [double rule] | A Londres: |
De l'imprimerie de R. Juigné, 17, Margaret Street,
Cavendish Square. | Se vend chez L. Deconchy, 100,
New Bond Street. | [short rule] | 1813.

[TITLE PAGE OF ATLAS:]

Planches | Du | Catalogue De La Collection
Minéralogique | Du | Comte De Bournon. | [double
rule] | A Londres, | De l'Imprimerie de R. Juigné,
17, Margaret Street, Cavendish Square. | Se Vend
Chez L. Deconchy, 100, New Bond-Street. | [rule] |
1813.

2 parts. [Text] 8°: π^2 a-b² c-h⁸ B-Nn⁸ O² (h8
blank); 341ℓ.; [2], [i]-cxiv, [2], [1]-563, [1] p.; [Atlas]
Oblong 4°: [2] p., 21 engraved plates (xl drawings;
signed Count de Bournon del J. Simpkins). PAGE SIZE:
(Text) 220 x 146 mm.; (Atlas) 280 x 216 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg],
"La Collection Minéralogique du Comte | de Bournon ...";
[1 pg], Blank.; [i]-cxiv, "Discours Préliminaire."; [2 pgs],
Blanks.; [1]-468, Text.; [469], "Observations | Sur | Le
Mémoire De M. L'Abbé Haüy, | Concernant | La Simplicité
de Lois auxquelles est soumise la | Structure des Cristaux,
| Inséré dans le 183e Numéro du Journal des Mines."; [470],
Blank.; [471]-548, Text of Memoire.; [549]-563, "Table |
Des Matières."; [1 pg], Blank.

RARE. Catalog of the large and important
mineral collection created by Bournon. The "Discours
Préliminaire" provides a history of the collection's
formation and observations about the science of
mineralogy. There is also an extensive commentary on
Bournon's relationship with the British Museum and
its trustees. The text contains a detailed description
of the collection's specimens, with information on the
minerals chemical and physical properties. Throughout
Bournon references Haüy and other mineralogists. A
separate section deals with Haüy's theories on crystal
structure.

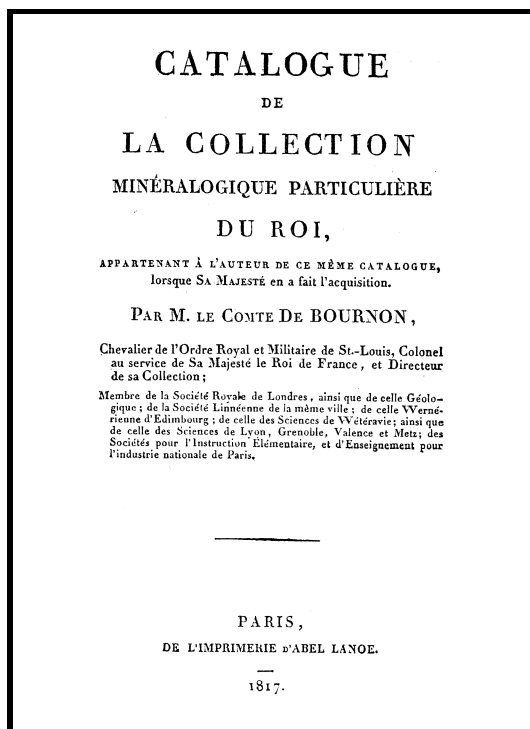
REFERENCES: BL: [973.c.20.]. • Burke, *Origins of the
Science of Crystals*, 1966: 127-28. • Smith, *100 Years of the
Mineral Collection*, 1969: 239-40.

755. Collection catalog, 1817: Catalogue | De | La Collection
| Minéralogique Particulière | Du Roi, | Appartenant À
L'Auteur De Ce Même Catalogue, | lorsque Sa Majesté en
a fait l'acquisition. | Par M. le Comte De Bournon, |
[...9 lines of titles and memberships, split into 2 sections...] |
[rule] | Paris, | De L'Imprimerie d'Abel Lanoe. | [short
rule] | 1817.

4°: [Text] 4°: π^{10} B-Hh⁸; 290ℓ.; [4], [i]-xv, [1], [1]-
557, [3] p. [Atlas] Oblong 4°: 21 engraved plates (identical
to the 1813 edition). PAGE SIZE: 220 x 148 mm.

CONTENTS: [2 pgs], Half title page, "Catalogue," verso
blank.; [2 pgs], Title page, verso blank.; [i]-xv, "Préface."; [1
pg], Blank.; [1]-468, Text.; [469]-557, "Table | Des
Matières."; [1 pg], Blank.; [1 pg], "Errata."; [1 pg], Blank.;
[At end], 21 folding engraved plates.

RARE. This is a modified reissue of the *Catalogue de
la Collection Minéralogique* (London, 1813). The "Discours
Préliminaire" and the commentary on Haüy's Memoire
are omitted. The former is now replaced with a Préface
describing the acquisition of the collection by the French
state, but the text describing the specimens is unchanged.



CATALOGUE, 1817

The plates are from the 1813 issue.

REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: 127-8. • Dana's 7th (Bibliography): 67. • Partsch, *Katalog der Bibliothek*, 1851: no. 463. • Smith, *100 Years of the Mineral Collection*, 1969: 239-40.

French editions

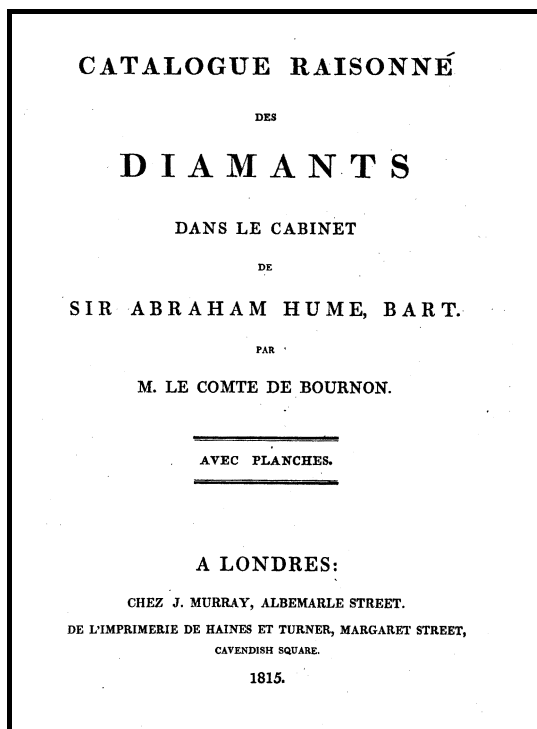
756. — French, 1815 [First edition].

Catalogue | Raisonné | Des | Diamants | Dans Le
Cabinet | De | Sir Abraham Hume, Bart. | Par
| M. Le Comte De Bournon. | [double rule] | Avec
Planches. | [double rule] | A Londres: | Chez J.
Murray, Albemarle Street. | De L'Imprimerie De
Haines Et Turner, Margaret Street, | Cavendish
Square. | 1815.

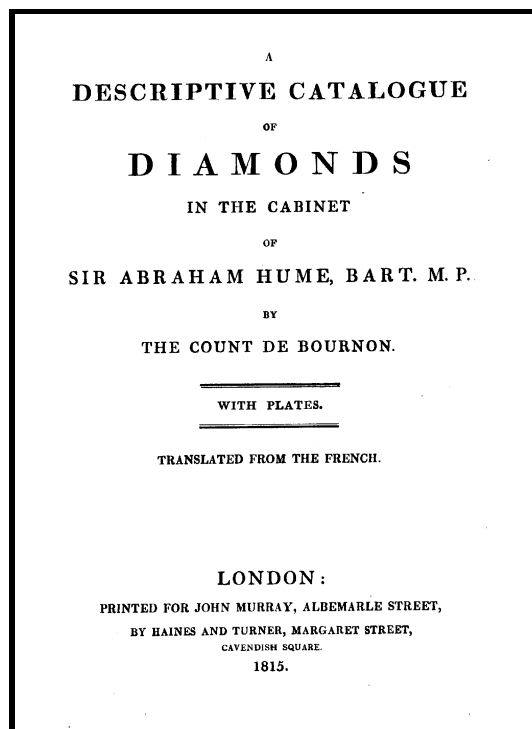
4°: π^3 b⁴ c⁵ B-E⁴ χ^1 ; 28ℓ.; [i]-xxi, [1], [1]-33, [1] p.,
4 plates. Folding table at page xvii. PAGE SIZE: 280 x
204 mm. VERY SCARCE.

CONTENTS: [2 pgs], Half title page, "Catalogue
Raisonné | Des Diamants," verso blank.; [i-ii], Title page,
verso blank.; [iii]-iv, "Avis."—signed A.H., April 1815.;
[v]-xvi, "Lettre | De | M. Le Comte De Bournon | A
| Sir Abraham Hume, | Sur Les Loix De Cristallisation
Du Diamant; | Accompagné De | Deux Tableaux, |
Nécessaires A Eclaircir Les Descriptions Contenus Dans
Ce Catalogue."—signed Comte De Bournon, 1 August
1815.; [Folding table: "Tableau De Formes Cristallines Du
Diamant."]; xvii, "Tableau Des Numeros Et Des Figures."; [xviii],
Blank.; xix-xxi, "Observations."; [1 pg], Blank.; [1]-
33, Text.; [1 pg], Blank.; [At end], 4 plates.

REFERENCES: BL. • Burke, *Origins of the Science of
Crystals*, 1966: 127-28. • DSB: 2, 355 [by J.G. Burke]. •



CATALOGUE RAISONNÉ DES DIAMANTS, 1815



DESCRIPTIVE CATALOGUE OF DIAMONDS, 1815

Smith, *100 Years of the Mineral Collection*, 1969: 239-40.

757. 2nd edition, 1815: Catalogue | Raisonné | Des | Diamants | Dans Le Cabinet | De | Sir Abraham Hume, Bart. | Par | M. Le Comte De Bournon. | [double rule] | Avec Planches. | [double rule] | A Londres: | Chez J. Murray, Albemarle Street. | De L'Imprimerie De Haines Et Turner, Margaret Street, | Cavendish Square. | 1815.

4^o: π³ b⁴ c⁵ B-E⁴ F³; 30ℓ.; [i]-xxi, [1], [1]-37, [1] p., 5 plates. Folding table at page xvii. PAGE SIZE: 280 x 204 mm.

CONTENTS: [2 pgs], Half title page, "Catalogue Raisonné | Dell Diamants," verso blank.; [i-ii], Title page, verso blank.; [iii]-iv, "Avis."—signed A.H., April 1815.; [v]-xvi, "Lettre | De | M. Le Comte De Bournon | A | Sir Abraham Hume, | Sur Les Loix De Cristallisation Du Diamant; | Accompagné De | Deux Tableaux, | Necessaires A Eclaircir Les Descriptions Conteneues Dans Ce Catalogue."—signed Comte De Bournon, 1 August 1815.; [Folding table: "Tableau De Formes Cristallines Du Diamant."]; xvii, "Tableau Des Numeros Et Des Figures."; [xviii], Blank.; xix-xxi, "Observations."; [1 pg], Blank.; [1]-37, Text.; [1 pg], Blank.; [At end], 5 plates.

VERY RARE. This is the second French edition containing an extra 4 pages of text and an additional plate showing crystal drawings.

REFERENCES: BL.

English editions

758. First edition, 1815: A | Descriptive Catalogue | Of | Diamonds | In The Cabinet | Of | Sir Abraham Hume, Bart. M.P. | By | The Count de Bournon. | [double rule] | With Plates | [double rule] | Translated From The French. | London: | Printed For J. Murray, Albemarle Street, | By Haines and Turner, | Margaret Street, | Cavendish Square. | 1815.

4^o: [a]⁶ b⁶ B-D⁴ E⁵; 29ℓ.; [i]-xix (i.e. xxi), [1], [2], [1]-33, [1] p., one folding table, 4 plates of diamond crystals.

Page xxi misnumbered xix. PAGE SIZE: 292 x 225 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Advertisement."—signed "A.H." [Abraham Hume], May 1815.; [v], "Letter | From | The Count de Bournon | To | Sir Abraham Hume, | On The Crystallization Of The Diamond | Accompanied By | Two Tables, | Necessary To Elucidate The Descriptions Contained In The catalogue."; [vi], "The engraving of the Plates..."; [vii]-xvi, "Letter, &c."; xvii, "Table Of The Numbers And Figures | Under Which Are | The Planes Of The Different Modifications."; [xviii], Blank.; xix-xix (i.e. xxi), "Observations."; [1 pg], Blank.; [1 pg], "Descriptive Catalogue of Diamonds."; [1 pg], Blank.; [1]-33, "Catalogue."; [1 pg], Colophon.

PLATES: Bound at the end is one folding table, titled, "Table Of The Crystalline Forms Of The Diamond." In addition, there are 4 plates of diamond crystals showing 79 figures.

VERY SCARCE. Translation by Sir Abraham Hume [see note below] of *Catalogue Raisonné des Diamants* (London, 1815). Hume also wrote the short introduction.

Abraham Hume. (BORN: 1749; DIED: 1838) *English gentleman*. Second and last baronet. Hume was elected a member of Parliament from Petersfield, 1774 to 1780. He was elected a Fellow of the Royal Society in 1775, and he was vice-president of the geological society from 1809 to 1813. He was a collector of minerals, precious stones and old masters. Bournon cataloged his minerals, which were acquired by the Sedgewick Museum in Cambridge in 1841.

REFERENCES: BL. • Burke, *Origins of the Science of Crystals*, 1966: 127-8. • DSB: 2, 355 [by J.G. Burke]. • Smith, *100 Years of the Mineral Collection*, 1969: 239-40. (Hume) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 585, 204-214. • *Catalogue of Portraits of Naturalists*: 612 [1 portrait listed]. • DNB. • Poggendorff: 1, col. 1159. • Smith, *Early Mineralogy in Great Britain*, 1978. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 176.

759. 2nd edition, 1815: A | Descriptive Catalogue | Of |

BOWLES

Diamonds | In The Cabinet | Of | Sir Abraham Hume, Bart. M.P. | By | The Count de Bournon. | [double rule] | With Plates | [double rule] | Translated From The French. | London: | Printed For J. Murray, Albemarle Street, | By Haines and Turner, | Margaret Street, | Cavendish Square. | 1815.

4°: [a]⁶ b⁶ B-D⁴ E⁴ F³; 31ℓ.; [i]-xix (i.e. xxi), [1], [1]-37, [1] p., 5 plates. PAGE SIZE: 296 x 228 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Advertisement."—signed "A.H." [Abraham Hume], May 1815.; [v], "Letter | From | The Count de Bournon | To | Sir Abraham Hume, | On The Crystallization Of The Diamond | Accompanied By | Two Tables, | Necessary To Elucidate The Descriptions Contained In The catalogue."; [vi], "The engraving of the Plates..."; [vii]-xvi, "Letter, &c."; xvii, "Table Of The Numbers And Figures | Under Which Are | The Planes Of The Different Modifications."; [xviii], Blank.; xix-xix (i.e. xxi), "Observations."; [1 pg], Blank.; [1 pg], "Descriptive Catalogue of Diamonds."; [1 pg], Blank.; [1]-37, "Catalogue."; [1 pg], Colophon.; [At end], 5 plates.

VERY SCARCE. Translation by Sir Abraham Hume of *Catalogue Raisonné des Diamants* (London, 1815). Hume also wrote the short introduction.

Sinkankas (1994) #830 was to the compiler's research, the first bibliography that has called attention to this new edition. The number of specimens now described is 128 from 107, with the added plate showing various examples between numbers 108 to 128. Eventhough, no indication on the title page, this work should clearly be considered a second edition.

REFERENCES: BL. • Burke, *Origins of the Science of Crystals*, 1966: 127-28. • DSB: 2, 355 [by J.G. Burke]. • Sinkankas, *Gemology Bibliography*, 1993: no. 830.. • Smith, *100 Years of the Mineral Collection*, 1969: 239-40.

760. — French, 1824.

Description du Goniometre perfectionne de M. Adelmann. Paris, Hippolyte Tilliard, 1824.

8°: 16 p., one plate.

RARE. Bournon describes a goniometer invented by Adelmann, who was an asistant to him at he royal cabinet.

REFERENCES: *Freilich Sale Catalog*: no. 78. • Poggen-dorff: 1, cols. 261-2.

BOUTERWECK (Bouterwek), Friedrich. (BORN: Hüttenwerk Oker near Goslar, Germany, 15 April 1766; DIED: Göttingen, Germany, 9 August 1828) *German philosopher.*

Bouterweck was professor of philosophy and morals at the University of Göttingen. In 1808, he was elected a member Bayerischen Akademie der Wissenschaften [Bavarian Academy of Sciences].

REFERENCES: ADB. • DBA: I 7, 108-109; 131, 112-137; 1425, 456-460; II 161, 272-273, 277-283. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • NDB. • Poggen-dorff: 1, cols. 264-5 & 1542. • WBI.

761. — German, 1808.

Über die | Möglichkeit | einer | philosophischen Classification | der | Mineralkörper. | [rule] | Ein Gutachten | aus keiner Schuler. | [rule] | [wavy rule] | Göttingen, | bey Johann Friedrich Röwer. | 1808.

8°: [i]-viii, [1]-72 p.

RARE. Examines the benefits and problems of mineralogical classification of the time. It was written as an explanation to mineralogical students who were

perhaps bewildered by the chaos that seemed to reign in mineral systematics.

REFERENCES: BL: [973.b.10.(6.)]. • BMC: 1, 217. • LKG: XII 203. • NUC: 70, 57-9 [NB 0702977].

BOWLES, William. (BORN: Cork, Ireland, 1703; DIED: Spain, 1780) *Irish naturalist.*

Bowles studied natural history, chemistry and metallurgy in Paris. In 1752 he was appointed at the recommendation of Don Antonio de Ulloa, superintendent of the Spanish state mines and was also given the task to form a collection of natural history specimens and to fit up a chemical laboratory. To complete these tasks, Bowles travelled extensively throughout Spain, investigating its mines and natural history.

REFERENCES: BBA: I 132,109, 111-114; II 1326, 229-230. • *Dictionary of Irish Biography*. • DNB: 2, 977. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • Webb, *Compendium of Irish Biography*, 1878.

INTRODUCCION
A LA HISTORIA NATURAL,
Y A LA
GEOGRAFÍA FÍSICA DE ESPAÑA,
P O R
D. Guillermo Bowles.



CON SUPERIOR PERMISO.
En MADRID: En la Imprenta de D.FRANCISCO MANUEL
DE MENA.
AÑO DE 1775.

INTRODUCCION, 1775

762. — Spanish, 1775 [First edition].

Introduccion | A La Historia Natural, | Y A La | Geografía Física De España, | Por D. Guillermo Bowles. | [ornament] | Con Superior Permiso. | [rule] | En Madrid: En la Imprenta de D. Francisco Manuel | de Mena. | Año De 1775.

8°: [6], 48, 529, [6] p.

RARE. The author's principal work, this book is of interest to mineralogists for its early descriptions of the mines and geological features of Spain. It is described by *D.N.B.* as "having very considerable value

as being the first work of its kind." It contains large sections on botany, geology, mineralogy and mining, including a long section on the manufacture of saltpeter. In the preparation of the this edition, the author was assisted by Jose Nicolas de Azara y Perera, Marques de Nibbiano, [1730/1-1804], who also edited the second edition (1782).

REFERENCES: LKG: XIV 821. • Roller & Goodman, *Catalogue*, 1976: 1, 151.

763. 2nd edition, 1782: Introduccion | A La Historia Natural, | Y Á La | Geografia Física De España, | Por D. Guillermo Bowles. | Segunda Edicion, Corregida. | [ornament] | Con Superior Permiso. | En Madrdid: En la Imprenta Real. | Año de 1782.

4°: $\pi^4 a^4$ "a2"4 b-g4 h2 A-Cccc4; 326ℓ.; [28], 1-47, [1], 1-576 p. PAGE SIZE: 198 x 142 mm. VERY SCARCE.

CONTENTS: $\pi 1$, Blank.; $\pi 2r$, Title page.; $\pi 2v$, Blank.; $\pi 3r$ - "a2"3v, "Artículos de Cartas de Don Joseph Nicolas de Azara, que servirñn de Prólogo." [=4 letters dated at Rome between 7 June 1781 and 7 November 1782].; "a2"4r-b2v, "Discurso preliminar.;" 1-47, Introductory text.; [1 pg], Blank.; 1-573, Text dealing largely with the natural history of Spain including mines, geological features, agriculture, etc.; 574-576, "Índice de los artículos" [=Contents].

REFERENCES: Mengel, *Catalogue of the Ellis Collection*, 1972-83: 1, 193, no. 355.

764. 3rd edition, 1789: Introduccion | Á La Historia Natural, | Y Á La | Geografia Física De España, | Por | D. Guillermo Bowles. | Tercera edicion. | [ornament] | Con Superior Permiso. | [double rule] | En Madrid: En la Imprenta Real. | Año de 1789.

8°: 12, 46, 554 p. VERY SCARCE.

Facsimile reprint, 2003: *Introducción a la historia natural y a la geografía física de España por Guillermo Bowles*. Valencia, Librerías "París-Valencia", [2003]. [24], 554 p.

REFERENCES: Reiss & Sohn, *Auctioneers*: cat. 71 (2000), no. 2236.

765. French transl., 1776: Introduction a l'Histoire Naturelle et a la Géographie Physique de l'Espagne. Traduite de l'Original Espagnol par le Vicomte de Flavigny. Paris, L. Cellot & Jombart Fils, 1776.

8°: xii, 516 p.

VERY SCARCE. Translation by the Vicomte de Flavigny.

REFERENCES: LKG: XIV 823b.

766. 1778: Einleitung in die Naturgeschichte und physikalische Erdbeschreibung von Spanien; aus dem Spanischen Originale mit Anmerkung von Prof. Dieze. Aus d. Engl. mit den üblichen Nachrichten von Bowles... Leipzig, 1778.

8°:
VERY SCARCE. Translation by Prof. Dieze.

REFERENCES: LKG: XIV 822a.

767. 1785: Introduzione alla Storia naturale ed alla Geografia fisica di Spagna di G. Bowles, publ. e comm. dal Cav; D.G d'Azara. Trad. da F. Milizia. Parma, 1785.

2 vols. 8°:

VERY SCARCE. Translation by da F. Milizia.

REFERENCES: LKG: XIV 824c.

BOYLE, Robert. (BORN: Lismore, Ireland, 25 January 1627; DIED: London, England, 30 December 1691) *Irish chemist, physician & naturalist*.

Born the son of Richard Boyle, first earl of Cork, Robert entered into a comfortable life with many advantages and much affluence. He was educated by private tutors before entering Eaton at the age of eight. In 1639, he was sent with his next oldest brother to the Continent where he continued his education in the polite arts, language, mathematics and science. The outbreak of the English civil war caused his return to England. His support of the Parliamentarians brought him



BOYLE

into contact with many of the leading English scientists, and through them Boyle developed an interest in chemistry. He entered Oxford in 1656 to advance his studies. After the Restoration, Boyle frequently visited London, finally moving there in 1668. He was one of the founders of the Royal Society of London, and throughout the rest of his life he was one of its most influential and notable Fellows. His home was open to all those interested in science, and in a laboratory he had built onto the house, he performed all his experiments.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 31. • BBA: I 135, 143-443; 136, 1-22; 1219, 188-193; II 1328, 228-235. • *Catalogue of Portraits of Naturalists*: 211-2 [3 portraits listed]. • *Dictionary of Irish Biography*: 34, portrait. • DNB. • Drugulin, *Sechstausend Portraits*, 1863: nos. 605-11. • DSB: 2, 377-82 [by M.B. Hall]. • *Encyclopaedia Britannica*, 11th edition. • *Great Chemists*: 135-148, portrait. • Hunter, M., ed. *Robert Boyle Reconsidered*. Cambridge, 1994. • *ISIS*, 1913-65: 1, 182-5. • Maddison, R.E.W., *The Life of the Honourable Robert Boyle*, F.R.S. London, 1969. • More, L.T., *The Life and Works of the Honourable Robert Boyle*. New York, 1944. • Oster, M., "Biography, Culture, and Science: The Formative Years of Robert Boyle," *History of Science*, 31 (1993), 177-226. • Poggendorff: 1, cols. 267-9. • Sarjeant, *Geologists*, 1980: 2, 600-2, Suppl. 1 (1986), 1, 306-7 & Suppl. 2 (1995), 1, 458-9. • Schaedler, *Biographisch Handwörterbuch*, 1891: 16-7. • WBI. • *World Who's Who in Science*: 226.

768. — Latin, 1664 [First edition].

Brevis Ennarratio Quarundam Observationum, Factarum A Nobili Roberto Boyle De Adamante In Tenebris Lucente. Londoni, 1664.

8°: VERY RARE.

Experimenta Et Considerationes De Coloribus ... ceu Initium Historiae Experimentalis De Coloribus A Roberto Boyle Nobili Anglo, Et Societatis Regiae Membro. Londini, Herringman, 1665. [48], 444 p. Contains the *Brevis Ennarratio Quarundam Observationum, Factarum A Nobili Roberto Boyle De Adamante In Tenebris Lucente*.

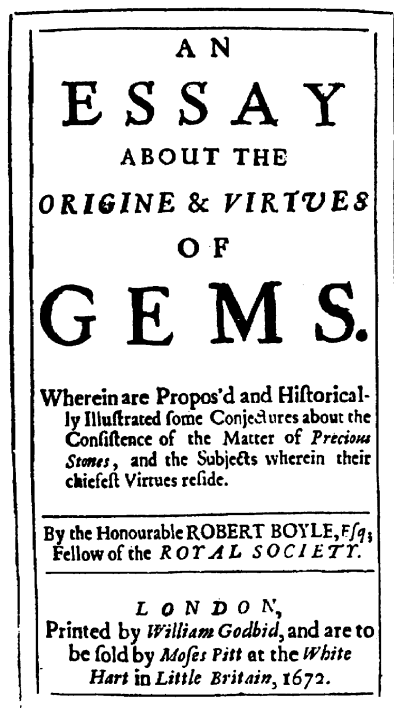
REFERENCES: LKG: X 1.

769. — Latin, 1667 [2nd edition].

Brevis enarratio quarundam observationum factarum a Rob. Boyle de adamante in tunebris lucente. Amstelodami, 1667.

8°:

VERY RARE. "A short account of some observations about a diamond that shines in the dark." Contained in: *Experimenta Et Considerationes De Coloribus ... seu Initium Historiae Experimentalis De Coloribus*. Amstelodami, Schagen, 1667.



AN ESSAY, 1672

770. — English, 1672 [Original edition].

[Contained within a double rule box:] An | Essay
| About The | Origine & Virtues | Of |
Gems. | Wherein are Propos'd and Historical-
| ly Illustrated some Conjectures about the |
Consistence of the Matter of Precious | Stones,
and the Subjects wherein their | chiefest Virtues
reside. | [rule] | By the Honourable Robert Boyle,
Esq; | Fellow of the Royal Society. | [rule] | London,
| Printed by William Godbid, and are to | be Sold
by Moses Pitt at the White | Hart in Little Britain,
1672.

8°: A-M⁸ N⁴; 100ℓ.; [16], 185 p. (i.e., 184, page 181 omitted).

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "The Publisher to the Reader."; [7 pgs], "The Preface."; [1 pg], Blank.; 1-[94], Text, section 1.; 95-185 [i.e., 184], Text, section 2.

VERY SCARCE. **REWORK THIS ENTRY.** VERY SCARCE. A monumental work that can be considered as the first scientific treatise in English on crystallography. Among the many revolutionary insights and theories set forth within this volume are Boyle's belief in the

hydrothermal origin of crystals and crystal growth by accretion of particles around a seed nucleus. Boyle also suspected that the nucleus around which the crystal grows has the same geometry as the final product. Further observations include that the finest crystals grow in open spaces, whereas distorted crystals are only "molds" of the space in which they formed, and that because of a vastly higher specific gravity, rock crystal was not any type of ice. This work also contains observations on the medical virtues of gems.

This celebrated treatise, justly called by Fulton "the beginning of the modern development in knowledge of crystal structure" (Sinkankas). "The literature [on gems] increased at an astonishing rate during the first two centuries after printing; but except for technical works on stonecutting and the setting of precious stones, the subject continued to be largely a mixture of myth and credulity until the advent of Boyle's Essay ... of Gems" (Fulton, p. 67).

The work 'really has very little to do with gemstones except as they happened conveniently to provide crystals for Boyle's inquiries in to the solid state of matter. There are two fundamental hypotheses posed in this essay, the first being "that many of these Gems and Medical Stones, either fluid bodies, as the Transparent ones; or in part made up of such substances as were once fluid," and second "that many of the real Virtues of such stones may be probably derived from the mixture of Metalline and other Mineral substances, which, (though unsuspectedly,) are usually incorporated with them." However, an even more fundamental concept underlies both hypotheses which Boyle clearly demonstrates that he was aware of even though he does not say so explicitly, that is, that crystals grow from solution from very minute particles which attach themselves to the growing crystal in such a manner that they add bulk and create characteristic external planes ...' (Sinkankas).

Facsimile reprint, 1972: An Essay About the | Origine and Virtues | of Gems | by | Robert Boyle | (Facsimile of the 1672 Edition) | Introduction by Arthur F. Hagner | Foreword by | George W. White | Hafner Publishing Company | New York | 1972. 8°: [i]-xxvii, [1], [16], 1-185 p. (i.e., 184, page 181 omitted), frontispiece (portrait of Boyle).

CONTENTS: [i-ii], Blank, verso "Contributions to the History of Geology."; [iii], "Contributions to the History of Geology Edited by George W. White Research Professor of Geology University of Illinois Volume 7."; [iv], Portrait of Robert Boyle, reproduced from the frontispiece of Boyle's "Complete Works," (London, 1772).; [v-vi], Title page, verso "Copyright ©1972 ..."; vii-viii, "Editor's Forward by George W. White."; ix-xxii, "Introduction by Arthur F. Hagner."; xxiii-xxv, "Bibliography"—29 entries.; xxvi-xxvii, "Glossary of Old Terms."; [1 pg], "In the original edition used for this facsimile reprint two signatures were improperly folioed. ..."; Facsimile reprint begins: [2 pgs], Title page, verso blank.; [6 pgs], "The Publisher to the Reader."; [7 pgs], "The Preface."; [1 pg], Blank.; 1-[94], Text, section 1.; 95-185, Text, section 2.

A modern facsimile reprint of *An Essay About the Origine and Virtues of Gems* (London, 1672), with the additions of a historical forward by George W. White [see note below] and an introduction by Arthur F. Hagner.

George Willard White. (BORN: North Lawrence, Ohio,

U.S.A., 8 July 1903; DIED: Champaign, Illinois, U.S.A., February 1985) *American geologist & historian of geology*. White earned his bachelor's degree at Otterbein College, Westerville, Ohio, and his master's and doctor's degree from Ohio State University. Between 1926 and 1941, he rose from instructor to department head at the University of New Hampshire. From 1941 to 1947, he was a professor of geology at Ohio State University, where upon he went to the University of Illinois, becoming head of the geology department, retiring in 1965. He specialized in glacial and groundwater geology, as well as the history of geology. He is remembered fondly by his many students.

REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: p. 13, 40, 44-5 & 69. • DSB: 2, 377-82. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 94. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 120-2. • Freilich Sale Catalog: no. 79. • Fulton, *Bibliography of Robert Boyle*, 1961: p. 67-8, no. 96. • Hoover Collection: no. 161. • Kobell, *Geschichte der Mineralogie*, 1864: p. 12-15. • LKG: XVI 215. • NLM 17th Century Books (Krivatsy): no. 1692. • Sinkankas, *Gemology Bibliography*, 1993: no. 863. • Ward & Carozzi, *Geology Emerging*, 1984: no. 289. • Wellcome Catalog (Books): 2, 222. • Wing: B-3947. • Wolf, *History of Science, 16th & 17th Centuries*, 1950: 2, 370-71. (White) ABA: II 668, 55. • *American Men of Science*. 5th ed., New York, 1933. • Carozzi, A.V., "Tribute to George W. White," *Earth Sciences History*, 2 (1983), no. 1, 1-3. • Sarjeant, *Geologists*, 1980: 3, 2415, Suppl. 1 (1987), 1, 887 & Suppl. 2 (1996), 2, 1196. • WBI.

771. — English, 1672 [Reprint, 1972].

An Essay About the | Origine and Virtues | of Gems | by | Robert Boyle | (Facsimile of the 1672 Edition) | Introduction by Arthur F. Hagner | Foreword by | George W. White | Hafner Publishing Company | New York | 1972.

8°: π^{14} A-M⁸ N⁴; 114ℓ.; [i]-xxvii, [1], [16], 1-185 p. (i.e., 184, page 181 omitted), frontispiece (portrait of Boyle). PAGE SIZE: 233 x 148 mm.

CONTENTS: [i-ii], Blank, verso "Contributions to the History of Geology."; [iii], "Contributions to the History of Geology Edited by George W. White Research Professor of Geology University of Illinois Volume 7."; [iv], Portrait of Robert Boyle, reproduced from the frontispiece of Boyle's "Complete Works," (London, 1772).; [v-vi], Title page, verso "Copyright ©1972 ..."; vii-viii, "Editor's Forward by George W. White."; ix-xxii, "Introduction by Arthur F. Hagner."; xxiii-xxv, "Bibliography"—29 entries.; xxvi-xxvii, "Glossary of Old Terms."; [1 pg], "In the original edition used for this facsimile reprint two signatures were improperly folioed. ..."; Facsimile reprint begins: [2 pgs], Title page, verso blank.; [6 pgs], "The Publisher to the Reader."; [7 pgs], "The Preface."; [1 pg], Blank.; 1-[94], Text, section 1.; 95-185, Text, section 2.

VERY SCARCE. Modern facsimile reprint of *An Essay About the Origine and Virtues of Gems* (London, 1672), with the additions of a historical forward by George W. White [see note below] and an introduction by Arthur F. Hagner.

George Willard White. (BORN: North Lawrence, Ohio, U.S.A., 8 July 1903; DIED: Champaign, Illinois, U.S.A., February 1985) *American geologist & historian of geology*. White earned his bachelor's degree at Otterbein College, Westerville, Ohio, and his master's and doctor's degree from Ohio State University. Between 1926 and 1941, he rose from instructor to department head at the University of New Hampshire. From 1941 to 1947, he was a professor of geology at Ohio State University, where upon he went to the University of Illinois, becoming head of the geology department, retiring in 1965. He specialized in glacial and

groundwater geology, as well as the history of geology. He is remembered fondly by his many students.

Latin editions

772. First edition, 1673: Exercitatio | De | Origine & Viribus | Gemmarum. | In qua proponuntur & Historicè | illustrantur Conjecturæ quæ- | dam circa materiæ Gemmarum | Consistentiam, necnon Subjecta, | quibus præcipuæ earum vires | inhærent. | [rule] | Authore | Roberto Boyle, | Nobili Anglo, e Societate Regiâ. | Londini, | Typis Guilielmi Godbid, & venales | prostant apud Mosem Pitt, ad in- | signe albi Cervi, in vico vulgo vo- | cato Little Britain. 1673.

12°: A⁶ B-G¹² H⁶; 84ℓ.; [12], 150, [6] p.

CONTENTS: [2 pgs], Title page, verso blank.; [5 pgs], "Editor Lectori."; [5 pgs], "Præloquium Authoris"; 1-146 [i.e., 147], Text.; 145-143 [i.e., 148-150], "Addenda."; [1 pg], "Errata."; [1 pg], Blank.; [4 pgs], Publisher's list of books for sale.

VERY SCARCE. Translation by [H.O. ??] of *An Essay about the Origine & Virtues of Gems* (London, 1672).

Henry Oldenburg. (BORN: Bremen, Gernay, c1618; DIED: Charlton, near Greenwich, England, 5 September 1677) *English scientist*. Oldenburg graduated from the University of Utrecht in 1641, and he matriculated at Oxford from 1657 to 1658. He taught in the Paedagogium of Bremen. Later he became a professor in the newly established University of Dorpat, in what is now Estonia. Although it is known that Oldenburg matriculated in the University of Utrecht in 1641, nothing is known with assurance about what he did during the following twelve years, but there is presumptive evidence that he was a tutor during these years. In 1656 he became tutor to Boyle's nephew, Richard Jones, later the third Viscount Ranelagh and first Earl of Ranelagh. Oldenburg made a profession of scientific administration. He founded a system of records in the Royal Society that is still followed, created an international correspondence of scientists, and founded the first scientific journal, *The Philosophical Transactions of the Royal Society of London*. Oldenburg began publishing in 1665 the *Philosophical Transactions*, which were his personal enterprise, to make money, although he never made as much as he hoped. He also translated papers for the *London Gazette*. He also translated and published works from abroad. He translated at least two of Boyle's works into Latin, and he appears to have functioned effectively as the publisher for a number of Boyle's works.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 94. • Freilich Sale Catalog: no. 80. • Fulton, *Bibliography of Robert Boyle*, 1961: no. 97. • LKG: XVI 215. • Wing: B-3956. (Oldenburg) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 831, 153-174. • *Biographie Universelle*. • DNB: 14, 988-90. • DSB: 10, 200-3 [by A. Rupert Hall]. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 2, cols. 321-2. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: pp. 1279-80.

773. 2nd edition, 1673: Specimen | De | Gemmarum | Origine | & | Virtutibus. | In quo proponuntur & historicè illustran- | tur quaedam conjecturæ circa con- | sistentiam materiæ Lapidum Præ- | tiosorum, & subjecta, in quibus eo- | rum præcipuæ virtutes consistunt. | Primum Anglicè conscriptum | Authore | Roberto Boyle, Armig | Societatis Regiæ Socio. | Numc Latine, interprete C.S. | [ornament] | Hamburgi, Apud Gothofredum Schultz. | Prostant & Amsterodami, | Apud Joannem Janssonium à Waesberge. | [rule] | M.DC.LXXIII.

12°:)(10 A-H¹² I⁶ K¹; 113ℓ.; [20], 206 p.

CONTENTS: [2 pgs], Engraved title page, verso blank.; [2 pgs], Printed title page.; [10 pgs], "Præfatio."; [5 pgs], "Editor ad Lectorem."; [1 pg], Blank.; 1-206, Text.

VERY SCARCE. Translation by C.S. of *An Essay about the Origine & Virtues of Gems* (London, 1672). Not seen,

BRACKEBUSCH

details from Fulton #98.

REFERENCES: Fulton, *Bibliography of Robert Boyle*, 1961: no. 98. • Hoover Collection: no. 162. • VD17: 39:115394Q.

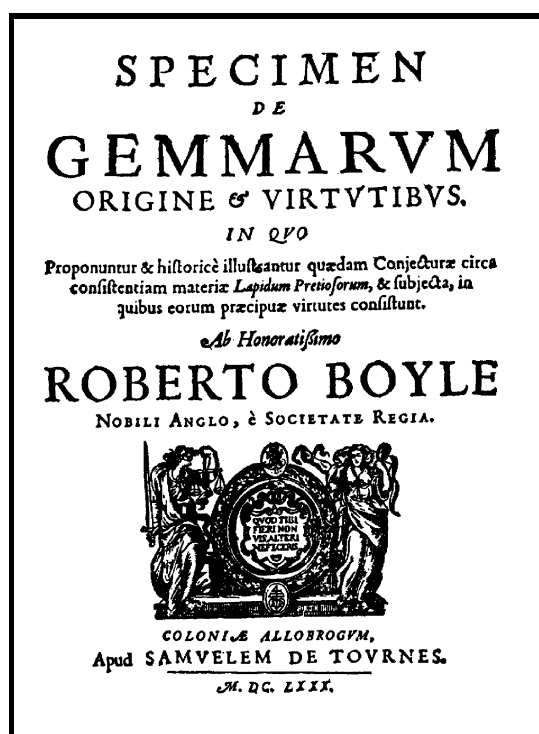
774. 3rd edition, 1677: Specimen | De | Gemmarvm | Origine & Virtutibvs. | ... [&c.] Ab Honoratissimo | Roberto Boyle | Nobili Anglo, è Societate Regia. | [ornament] | Genevæ, | Apud Samvelem De Tovrnes. | [short rule] | M. DC. LXXVII.

4°: π^3 A-G⁴ H¹; 27 ℓ .; [6], 58 p.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Præfatio."; [1 pg], "Editor ad Lectorem."; 1-58, Text.

VERY SCARCE. Translation by *An Essay about the Origine & Virtues of Gems* (London, 1672). Not seen, details from Fulton #99.

REFERENCES: Fulton, *Bibliography of Robert Boyle*, 1961: no. 99.



SPECIMEN DE GEMMARVM ORIGINE, 1680

775. 4th edition, issue A, 1680: Specimen | De | Gemmarvm | Origine & Virtutibvs. | In Qvo | Proponuntur & historicè illustrantur quædam Conjecturæ circa | Consistentiam materiæ Lapidum Prætorum, & subiecta, in | quibus eorum præcipuæ virtutes consistunt. | Ab Honoratissimo | Roberto Boyle | Nobili Anglo è Societate Regia. | [ornament] | Colonia Allobrogvm, | Apud Samvelem De Tovrnes. | [short rule] | M. DC. LXXX.

4°: π^3 A-G⁴ H¹; 32 ℓ .; [6], 58 p.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Præfatio."; [1 pg], "Editor ad Lectorem."; 1-58, Text.

VERY SCARCE. Translation of *An Essay about the Origine & Virtues of Gems* (London, 1672).

REFERENCES: Fulton, *Bibliography of Robert Boyle*, 1961: no. 100.

776. 4th edition, issue B, 1680: Specimen | De | Gemmarvm | Origine & Virtutibvs. | In Qvo | Proponuntur & historicè illustrantur quædam Conjecturæ circa | Consistentiam materiæ Lapidum Prætorum, & subiecta, in | quibus eorum præcipuæ virtutes consistunt. | Ab Honoratissimo | Roberto Boyle | Nobili Anglo è Societate Regia. | [ornament] | Genevæ | Apud Samvelem De Tovrnes. | [short rule] | M. DC. LXXX.

4°: π^3 A-G⁴ H¹; 32 ℓ .; [6], 58 p.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Præfatio."; [1 pg], "Editor ad Lectorem."; 1-58, Text.

VERY SCARCE. Identical to issue A, above, with only the imprint on the title page differentiating between the two.

REFERENCES: Fulton, *Bibliography of Robert Boyle*, 1961: no. 100A.

777. — Latin, 1676.

Observationes de generatione metallorum. London, 1676.

8°: VERY SCARCE.

REFERENCES: LKG: XIII 10.

778. — Latin, 1680.

Tract. de temperie subterraneanarum regionum. Genevæ, 1680.

8°: VERY SCARCE.

REFERENCES: LKG: XIII 11a.

779. — English, 1744.

The works of the honourable Robert Boyle in five volumes : to which is prefixed the life of the author. London : Printed for A. Millar, 1744.

5 vols.

VERY SCARCE. "The life of the Honourable Robert Boyle" / by Thomas Birch: v. 1, p. 1-139 of first paging. Bibliog. Includes bibliographical references.

Subject Science – Early works to 1800. Physics. Chemistry. Theology – History – 17th century. Medicine. Other author Birch, Thomas, 1705-1766.

BRACKEBUSCH, Ludwig. (BORN: Northeim, Germany, 1849; DIED: Alemania a Mediados, Argentina, 1906) *German/Argentiana mineralogist & geologist.*

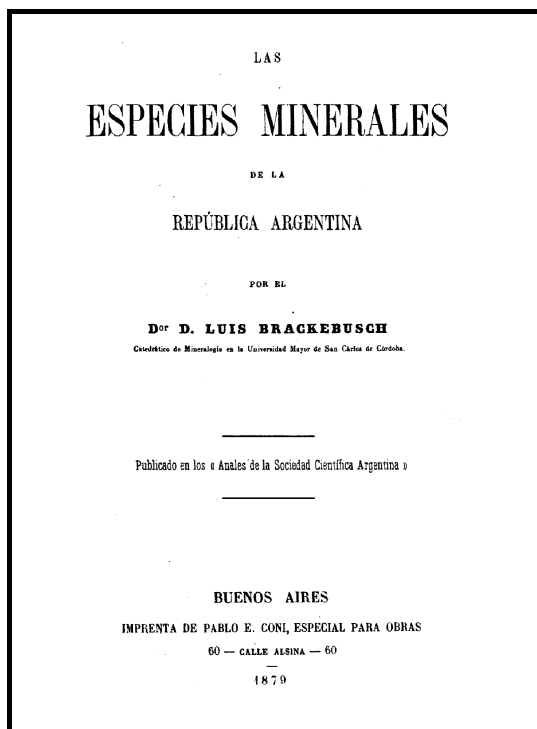
Brackebusch graduated from the University of Göttingen. He entered into the service of the Geological Institute of Prussia, where he studied in particular the geology of the Harz Mountains. Later, he succeeded Alfred Stelzner as professor of mineralogy and geology at the University of Córdoba. While there he concentrated his research on completing a geological map of Argentina.

REFERENCES: DBA: II 163, 114-118. • *Gran Enciclopedia Argentina*: 1, 575. • WBI.

780. — Spanish, 1879.

Las | Especies Minerales | De La | República Argentina | Por El | D^{or} D. Luis Brackebusch | Catedrático de Mineralogia en la Universidad Mayor de San Carlos de Córdoba. | [rule] | Publicado en los Anales de la Sociedad Científica Argentina | [rule] | Buenos Aires | Imprenta de Pablo E. Coni, Especial Para Obras | 60 — Calle Alsina — 60 | [rule] | 1879.

8°: [1]-120, [1]-4 p. PAGE SIZE: 250 x 160 mm.



LAS ESPECIES MINERALES, 1879

CONTENTS: [1]-2], Title page, verso blank.; [3]-5, "Introduccion"—signed November 1878.; [6], Blank.; [7]-117, Text.; [118], Blank.; [119]-120, "Índice De Las Especies Minerales De La República Argentina."; [1]-4, "Addend A Las Especies Minerales | De La República Argentina."

VERY SCARCE. Geographical distribution of mineral species within the country of Argentina. An index at the end provides reference to specific minerals described in the volume.

REFERENCES: NUC: 71, 333-4 [NB 0726446].

781. — Spanish, 1882 [Collection Catalog].

Colección mineralógica de la República Argentina. Exposición continental, 1882, Buenos Aires, Recol. y comp. por Luis [Ludwig] Brackebusch. Buenos Aires, Kraft, 1882

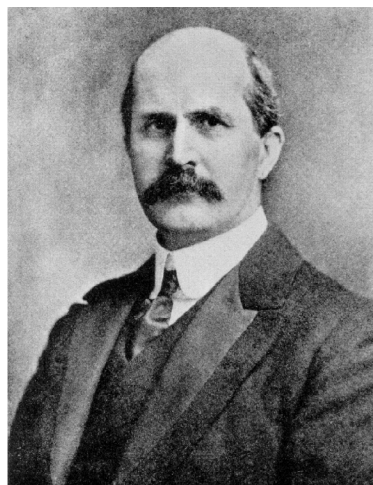
8°: 52 p.

VERY RARE. Catalog of a collection of minerals and other geological specimens exhibited by the Argentina government during the Continental Exposition of 1882.

REFERENCES: BL: [no copy listed].

BRAGG, William Henry. (BORN: Wigton, Cumberland, England, 2 July 1862; DIED: London, England, 12 March 1942) *English physicist & crystallographer.*

Bragg was professor of physics successively at the University of Adelaide, South Australia (1886-1908), University of Leeds (1909-1915) and the University College of London (1915-1920). In 1923, he became director of the Royal Institution. In association with his son, William Lawrence, he developed an ionization spectrometer, which



W.H. BRAGG

he successfully applied to the X-ray study of crystals, and is today known as an important pioneer in the field.

REFERENCES: *Annual Register*. • Barr, *Index to Biographical Fragments*, 1973: 32. • BBA: II 1330, 380-382. • *British Journal of the History of Science*: 5 (1971), 258-81 [by R.H. Stuewer]. • Caroe, G.M., *William Henry Bragg*. Cambridge, 1978. • DNB: 1941-1950, 99-101. • DSB: 2, 397-400 [by P. Forman]. • *Encyclopaedia Britannica*, 11th edition. • Fruton, *Bio-Bibliography*, 1982: 89. • *ISIS*, 1913-65: 1, 186. • *Mineralogical Magazine*: 28 (1947), no. 199, 185-6 [by L.J. Spencer]. • *Nature*: 149 (1942), 346-51 [by E.N. da C. Andrade]. • *Nature*: 195 (1962), 320-5 [by P.P. Ewald]. • *Obituary Notices of the Royal Society*: 4 (1943), no. 12, 277-300, portrait [by E.N. da C. Andrade]. • Poggendorff: 5, 157-8, 1417, 6, 307-8 & 7b, 534-6. • Sarjeant, *Geologists*, 1980: 2, 606 & Suppl. 2 (1995), 1, 460. • *Science*: 95 (1942), 595-6 [by W.F.G. Swann]. • WBI. • *World Who's Who in Science*: 229.

782. — English, 1915 [First edition].

X rays and crystal structure by W.H. Bragg and W.L. Bragg. London : G. Bell and Sons, 1915.

8°: vii, 228 p., 4 plates, diagrams.

VERY SCARCE. Bragg began his studies on crystal structure in 1912 and developed new methods for measuring the wavelengths of X-rays. The 'Bragg relation' opened up the use of X-rays in the study of solid bodies, particularly crystals. Through the use of the spectrometer which was built to measure the wavelengths, distances between atoms within a crystal lattice could be calculated by determining the refraction of a known wavelength of X-ray on to film surrounding target. This was a pivotal milestone in crystallographic determination. Before 1913, only general symmetry relationships could be pronounced about crystals, but by the end of 1913, the Braggs had reduced crystal structure analysis to a technical procedure. For these researches the father and son team received the Nobel Prize for physics in 1915. Their *X-rays and Crystal Structure* is the first separate publication collecting together material surrounding this remarkable research.

Earlier article, 1913: The Reflection of X-Rays By Crystals by W.H. Bragg and W. L. Bragg, published in: *Proceedings of the Royal Society, London*, 88 (1913), pp. 428-

BRANDT

438.

This is the first serialization describing the 'Bragg relation,' and which lead the Bragg's to construct the first X-ray spectrometer.

REFERENCES: Norman Catalog: no. 319. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 158. • *USGS Library Catalog*.

783. 2nd edition, 1916: X-rays and crystal structure, by W. H. Bragg ... and W. L. Bragg. Second edition. London, G. Bell and Sons, Ltd., 1916.

8°: vii, [1], 228, [2] p., 4 plates, diagrams. VERY SCARCE.

REFERENCES: NUC.

784. 3rd edition, 1918: X Rays | And | Crystal Structure | By | W.H. Bragg, M.A., D.Sc., F.R.S. | Quain Professor Of Physics, University Of London | And | W.L. Bragg, B.A. | Fellow Of Trinity College, Cambridge | Third Edition | [ornament] | London | G. Bell And Sons, Ltd. | 1918.

8°: vii, [1], 228, [2] p., 4 plates, diagrams. VERY SCARCE.

REFERENCES: NUC.

785. — English, 1925 [First edition].

Concerning | The Nature Of Things | Six Lectures delivered | at the Royal Institution | By | Sir William Bragg | K.B.E., D.Sc., F.R.S. | Director Of The Royal Institution | [ornament] | London | G. Bell And Sons, Ltd. | 1925.

8°: xi, 231, [1] p., 32 plates, illus.

VERY SCARCE. Professor Bragg's Christmas Lectures for children given at the Royal Institution were famous. One series was issued in book form under the title, *Concerning the Nature of Things* (London, 1925). Here, Bragg shows his genius in explaining in simple terms the complex nature of solids, liquids and gases that envelop us. Using layman language, he describes and defines atoms, gases, liquids, crystals, ice and snow crystals and metal crystals, all in a very readable volume. As an accurate introductory text it was at its publication a great source for readers wanting to know the internal structure of everything, and today it can still be examined to gain valuable insights into the nature of matter.

Reprinted: The book was reprinted in 1927, 1931, and 1933 with apparently little change to the text.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 157.

786. — English, 1929 [American edition].

[Contained within a single rule box:] An Introduction | to | Crystal Analysis | By | Sir William Bragg | K.B.E., D.Sc., F.R.S. | [ornament] | New York: | D. Van Nostrand Company, Inc. | Eight Warren Street.

8°: VERY SCARCE.

REFERENCES: BL. • NUC.

787. — English, 1933-4 [First edition].

The | Crystalline State | Edited By | Sir W.H. Bragg, O.M., K.B.E., D.Sc., F.R.S. | And | W.L. Bragg, D.Sc., F.R.S. | Volume I | A General Survey | By | W.L. Bragg | London | G.Bell And Sons Ltd | 1933.

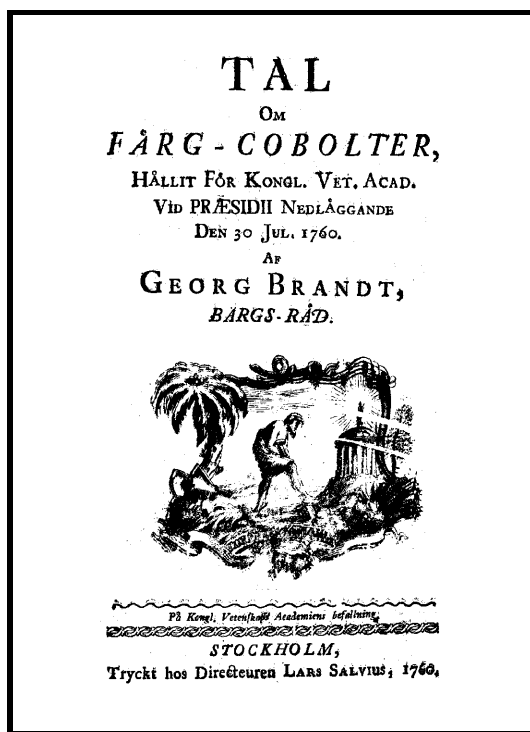
8°: xiv, 352 p., 32 plates, numerous illus. VERY SCARCE.

REFERENCES: BL. • Dana's 7th (Bibliography): 67. • Roller & Goodman, *Catalogue*, 1976: 1, 158.

BRANDT, Georg. (BORN: Riddarhytta, Westmanland, Sweden, 26 June 1694; DIED: Stockholm, Sweden, 29 April 1768) *Swedish chemist*.

Brandt was educated under Boerhaave in Leiden, The Netherlands, receiving his M.D. in 1726. In 1727, he became director of the chemistry laboratory of the Swedish Bureau of Mines. Appointed the warden of the Stockholm mint in 1730, Brandt was later appointed professor of chemistry at the University of Uppsala. He was the first to produce accurate researches on arsenic and to discover zinc in calamine (now smithsonite). He distinguished between potash and soda in 1746.

REFERENCES: Almquist, *Bergskollegium*, 1909: p. 178. • Bergman, T.O., *Äminnelsetal öfver Georg Brandt*. Stockholm, 1769. • DSB: 2, 421-2 [by U. Boklund]. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: p. 546-7. • Oseen, C.W., "En episod i den svenska kemiens historia," *Lychnos*, 1940, 73-85. [Concerns Brandt's 1748 discovery that gold dissolves in Aqua-Rega acid]. • Partington, *History of Chemistry*, 1961-70: 3, 168-9. • Poggendorff: 1, col. 280. • SBA: Scandinavian Biographical Archive: B-034, 287-288; B-034, 310. • *Svenskt Biografiskt Handlexikon*: 1, 131. • *Svenskt Biografiskt Lexikon*: 5, 788-9. • WBI. • *World Who's Who in Science*: 231.



TAL OM FÄRG-COBOLTER, 1760

788. — Swedish, 1760 [First separate edition].

Tal | Om | Färg-Cobolter, | Hällit FöR Kongl. Vet. Acad. | Vid Præsidii Nedläggande | Den 30 Jul. 1760. | Af | Georg Brandt, | Bärges-Råd. | [vignette]

[wavy rule] | På Kongl. Ventenskaps Academiens befallning. | [ornate rule] | Stockholm, | Tryckt hos Directeuren Lars Salvius, 1760.

8°: A⁸ B⁴; 12l. [1]-24 p. Title-vignette, head-and tailpiece, initial.

CONTENTS: [1-2], Title page, verso blank.; [3]-22, Text.; 23-24, "Svar, | Gifvet på | ... | Min Herre!"

RARE. By roasting what at the time was called Swedish pyrite (mineral: linnaeite), Brandt obtained a black powder, which he further reduced with charcoal powder and fluxes in the intense heat of a forge with bellows. The result was a compact mass with a reddish tint that was magnetic, malleable and of high melting point. This is the first separate publication announcing Brandt's discovery of the element cobalt, describing the process of reducing the metal.

REFERENCES: BL: [965.k.2.(5.)]. • Jonathan Hill, Bookseller: cat. 43, no. 46. • LKG: XVI 321. • Partington, *History of Chemistry*, 1961-70: 3, 168-9.

BRANT, Sebastian. (BORN: Strassburg, Germany, 1458; DIED: Strassburg, Germany, 10 May 1521) *German humanist & satirist.*

Brant studied at Basel and took the degree of doctor of laws in 1489. He was a longtime professor of jurisprudence there. He retired to Strassburg, where he was made syndic of the town. Today, he is remembered for his famous satire, *Das Narrenschiff* [English: *Ship of Fools*] (1494), which describes a ship laden with fools and steered by fools to the fools' paradise of Narragenia.

REFERENCES: ADB. • DBA: I 136, 191-204; II 167, 309-331. • *Encyclopaedia Britannica*, 11th edition: 4, 431. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • NDB. • WBI. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 103.

789. — German & Latin, 1492 [First edition].

Von dem donnerstein gefallē im xcij. iar: vor Ensisheim.

Folio broadside. At the head is a woodcut showing the impact of the meteorite.

EDITIO PRINCEPS. Very rare. Provides an account of the meteorite ("thunder-stone") which fell near Ensisheim, Upper Alsace, France, on November 16, 1492 at 11:30 P.M. It is the earliest meteorite the fall of which was seen and recorded, and the substance of which was preserved. The Emperor Maximilian, arriving at Ensisheim shortly after the fall, presented a fragment to the Archduke Sigismund, retained another for himself, and deposited the remainder in the parish church. This 260 pound fragment remained in the choir of the parish church for centuries until during the French Revolution the stone was taken and placed in the public library of Colmar. Subsequently, fragments were broken off and presented to various persons and institutions. Fourcroy obtained a piece of 9.5 kilograms for the Musée d'Histoire Naturelle in Paris. The remainder weighing about 40 kilograms was afterwards returned to Ensisheim.

REFERENCES: Burke, *Cosmic Debris*, 1986: 175. • GW: no. 5023. • Heitz, P., *Flugblätter des Sebastian Brant*. Herausgegeben von Paul Heitz, Nachwort von F. Schulze. Straßburg, 1915. Folio with 22 double-page plates: [plate 2]. • Klebs, *Incunabula Scientifica*, 1938: no. 210.1. •



VON DEM DONNERSTEIN GEFALLĒ, 1492

Meunir, "Notice historique sur la Collectin de Météorites du Muséum d'Histoire Naturelle," in: *Centenaire de la Fondation du Muséum d'Histoire Naturelle*, Paris, 1893: p. 403. • Murray, *Museums*, 1904: 1, 10. • Sarton, *Scientific Incunabula*, 1938: p. 119. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 3546. • Zittel, *History of Geology*, 1901: p. 163.

BRARD, Cyprien Prosper.

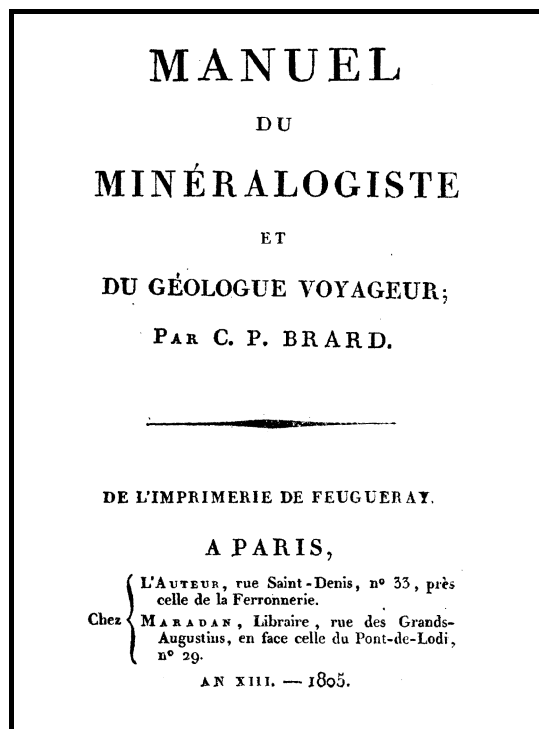
(BORN: L'Aigle, Dép. Orne, France, 21 November 1786; DIED: Lardin, France, 28 November 1838) *French mineralogist.*

Brard studied mineralogy under Bronignart, and while still a student published his *Manuel du Minéralogiste et du Géologue Voyageur* (Paris, 1805) for his friends. He made an extensive tour by foot of the Alps in Switzerland and Central Europe, and in 1808 he became an aide to Faujas. Brard was appointed director of the copper mines of Servoz in 1813 where he was the first to use anthracite coal as a fuel. In 1816, he entered into a franchise that created a glassware factory in Lardin. The glass produced became well known as the Brardville pattern. In 1828, for some unknown reason, Brard abandoned this pursuit. He retired to Lardin in 1832.

REFERENCES: ABF: I 149, 236-239; II 97, 56. • DBF: 7, 158 [by St. Le Tourneur]. • Feller, *Biographie Universelle*, 1851. • Jouannet, J., *Notice Historique sur C.-P. Brard*. Paris, 1839, portrait, biblio.. • Lambrecht & Quenstedt, *Catalogus*, 1938: 55. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, col. 281 & 3, 182. • Sarjeant, *Geologists*, 1980: 2, 613. • WBI.

790. — French, 1805 [First edition].

Manuel | Du | Minéralogiste | Et | Du Géologue Voyageur; | Par C.P. Brard. | [ornate rule] | De L'Imprimerie De Feugueray. | A Paris, | Chez



MANUEL DU MINÉRALOGISTE, 1805

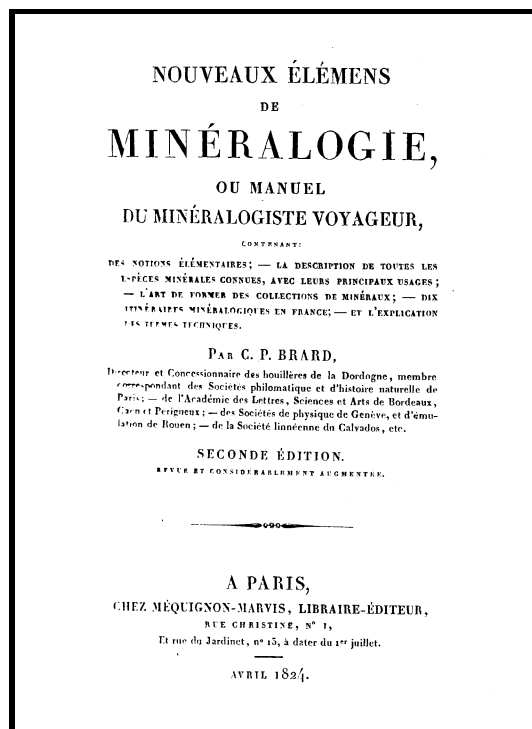
[The next three lines braced on the left by a "{":]
L'Auteur, rue Saint-Denis, n° 33, près | celle de
la Ferronnerie. | - - | An XIII.—1805.

12°: π^4 A-T¹² V7; 234 ℓ .; [6], [i]-ii, [1]-470 p., one folding plate. PAGE SIZE: 177 x 107 mm. uncut.

CONTENTS: [2 pgs], Half title page, "Manuel | Du | Minéralogiste | Et | Du Géologue Voyageur," verso blank.; [2 pgs], Title page, verso "L'Auteur désavoue tous les Exemplaires qui ne sont pas signés par lui."; [1 pg], Dedication to Monseigneur de Lacépède.; [1 pg], Blank.; [i]-[ii], "Avertissement sur l'objet et le plan de cet ouvrage."; [1]-24, "Manual du Minéralogiste et du Géologue voyageur. Notions Préliminaires."; 25-419, "Distribution et description des Minéraux."; 420-434, "Description des Roches, d'après la méthode de M. Faujas."; 435-450, "Description des produits volcaniques, d'Après la méthode de M. Faujas."; [451]-456, "Explication des termes peu vus qui se rencontrent souvent dans le cours de la description des minéraux."; [457]-459, "Description des solides que j'ai été obligé de nommer dans le cours de cet Ouvrage."; [460]-464, Tables listing species by contained element: Silix, Cabonate, etc.; 465-470, "Table des Articles."; [At end], Folding plate, 220 x 175 mm., showing 9 figures of mineralogical apparatus including blow-pipe, goniometer, Nicholson's hydrometer, tweezers[?]. At the bottom right hand corner, "Euphrasie, Picquenot, Sculp."

VERY SCARCE. A popular guide to travelling geologists and mineralogists with "description des produits volcaniques apres la méthode de M. Faujas" and the "nécessaire du Minéralogiste" with table.

REFERENCES: *Freilich Sale Catalog*: no. 85 [wrong year].
• Lambrecht & Quenstedt, *Catalogus*, 1938: p. 55. • LKG: XII 166. • Ward & Carozzi, *Geology Emerging*, 1984: no. 303.



NOUVEAUX ÉLÉMENTS DE MINÉRALOGIE, 1824

791. 2nd edition, 1824: Nouveaux Éléments | De | Minéralogie, | Ou Manuel | Du Minéralogiste Voyageur; | Contenant: | Des Notions Élémentaires; — La Description De Toutes Les | Espèces Minérales Connues, Avec Leurs Principaux Usages; | — L'Art De Former Des Collections De Minéraux; — Dix | Itinéraires Minéralogiques En France; — Et L'Explication | Des Termes Techniques. | Par C.P. Brard, [...5 lines of titles and memberships...] | Seconde Édition. | Revue Et Considérablement Augmentée. | [ornate rule] | A Paris, | Chez Méquignon-Marvis, Libraire-Éditeur, | Rue Christine, N° 1, | Et rue du Jardinnet, n° 13, à dater du 1^{er} juillet. | [short rule] | Avril 1824.

8°: π^1 b⁴ 1-428 437; 348 ℓ .; [i]-xj, [1], [1]-686 p., one folding plate. PAGE SIZE: 208 x 125 mm. VERY SCARCE.

CONTENTS: [ii-iii], Title page, verso blank.; [iv], Dedication to Comte de Lacépède, signed P. Brard.; [v], Blank.; [vi]-xj, "Introduction."; [1], Blank.; [1]-666, Text.; 667-676, "Terminologie."; 677-678, "Description Des Solides."; [679]-686, "Table Alphabétique."; [At end], One folding plate.

PLATES: The one folding plate is signed Cloquet and shows various apparatus.

792. 3rd edition, 1838: Nouveaux Éléments | De | Minéralogie | ou | Manuel | Du Minéralogiste Voyageur; | Par M. Brard, | Ingénieur Civil, Chevalier De La Légion-D'Honneur. | [rule] | Troisième Édition, | Revue, Corrigée Et Mise Au Niveau Des Connaissances Actuelles | Par M. Guillebot, | Ancien Élève De L'École Polytechnique, Élève Ingénieur Des Mines. | [ornate rule] | Paris, | Méquignon-Marvis Père Et Fils, | Libraires-Éditeurs, | Rue Du Jardinnet, 13. | [short rule] | 1838.

8°: π^4 1-378; 300 ℓ .; [i]-viii, [1]-590, [2] p., one folding plate. PAGE SIZE: 205 x 126 mm.

CONTENTS: [i-ii], Half title page, "Nouveaux Éléments | De | Minéralogie," verso "Corbeil, Imprimerie De Créte."; [iii-iv], Title page, verso blank.; [v]-viii, "Introduction.";

[1]-572, Text.; [573]-581, "Terminologie | ou | Explication Des Termes Et Des Acceptions Peu Usités | Dont on se sert dans le Cours De La Description Des Minéraux."; [582]-590, "Table Alphabétique."; [one folding plate]; [1 pg], "Errata."; [1 pg], Blank.

VERY SCARCE. Prepared by PIERRE AUGUSTE JOSEPH DRAPIEZ.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 161.

793. — French, 1808.

Traité | Des Pierres Précieuses, | Des Porphyres, | Granits, Marbres, Albatres, | Et Autre Roches | Propres A Recevoir Le Poli Et A Orner Les Monumens | Publics Et Les Edifices Particuliers; | Suivi De La Description Des Machines Dont On Se Sert Pour Tailler, Polir | Et Travailler Ces Perres; | Et D'un Coup D'oeil Général Sur L'art Du Marbrier; | Ouvrage Utile Aux Joualliers, Lapidaires, Bijoutiers; Aux | Architacter, Decorateurs etc., etc. | Orné De Planches. | Par C. Prosper Brard, | Attaché Au Muséum D'Histoire Naturelle. | Première Partie. | Paris, | Chez F. Schoell, Libraire, | Rue Des Fossés Saint-Germain-L'Auxerrois, N.º 29. | 1808.

2 parts. [Part 1] 8º: [4], [i]-xxvii, [1], [1]-[248] p. [Part 2] 8º: [4], [249]-565, [1] p., plates I-VII (i.e., 8 plates).

CONTENTS: [Part 1] [2 pgs], Half title page, "Traité | Des | Pierres Précieuses," verso advertisement.; [2 pgs], Title page, verso blank.; [i]-xvi, "Table | Des Matières Conteues Dans | Les Deux Parties."; xvii-xxvii, "Introduction."; [1 pg], Blank.; [1], Sectional title page, "Des | Pierres Précieuses | Premier Partie."; [2], Blank.; [3]-247, Text part one.; [248], Blank.

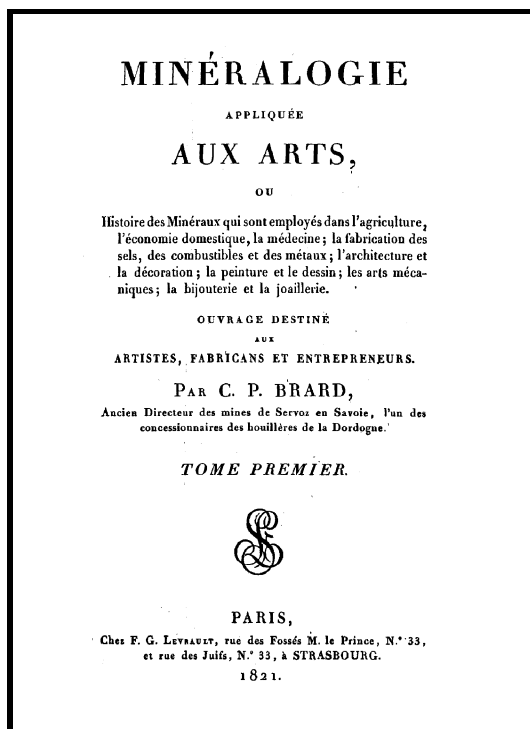
[Part 2] [2 pgs], Half title page, "Traité | Des | Pierres Précieuses," verso blank.; [2 pgs], Title page, verso blank.; [249], Sectional title page, "Deuxième Partie. | Des Roches."; [250], Blank.; [251]-524, Text.; [525], "Première Table. | Pesanteurs spécifiques des principales pierres | précieuses."; [526], "Seconde Table. | Pesanteurs spécifique en pied cube princi- | paux granits, porphyres, marbres et al- | bâtres."; [527]-565, "Table Alphabétique."; [1 pg], Blank.

RARE. A large, detailed work which gives extensive information on gemstones, as well as ornamental and building stones. Their extraction, working, and polishing are covered. Essentially every mineral that could be considered a gemstone is fully treated in this work including diamond, ruby, sapphire, chrysoberyl, spinel, topaz, beryl, euclase, quartz, fluorite, natrolite, jade, calcite, etc. The second part of the work is devoted to a study of rocks and the minerals that make them up.

REFERENCES: BL: [234.k.30.]. • *Freilich Sale Catalog*: no. 86. • LKG: XVI 242. • Sinkankas, *Gemology Bibliography*, 1993: no. 897.

794. — French, 1821.

Minéralogie | Appliquée | Aux Arts, | Ou | Histoire des Minéraux qui sont employés dans l'agriculture, | l'économie domestique, la médecine; la fabrication des | sels, des combustibles et



MINÉRALOGIE APPLIQUÉE AUX ARTS, 1821

des métaux; l'architecture et | la décoration; la peinture et le dessin; les arts méca- | niques; la bijouterie et la joaillerie. | Ouvrage Destiné | Aux | Artistes, Fabricans Et Entrepreneurs. | Par C.P. Brard, | [...2 lines of titles and memberships...] | Tome Premier. | [ornament] | Paris, | Chez F.G. Levrault, rue des Fossés M. le Prince, N.º 33, | et rue des Juifs, N.º 33, à Strasbourg. | 1821.

3 vols. [VOL 1] 8º: [2], [i]-viii, [2], [1]-696 p., 4 folding plates. [VOL 2] 8º: [4], [1]-491, [1] p., 3 folding plates. [VOL 3] 8º: [4], [1]-524 p., 8 folding plates (one hand-colored). PAGE SIZE: 192 x 120 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Minéralogie | Appliquée | Aux Arts," verso "Le nombre d'exemplaires prescrit par la loi aété | déposé. Tous les exemplaires portent la signature de | l'editeur."—signed in ink, "B.G. Leurauld."; [i-ii], Title page, verso blank.; [i]-viii, "Introduction."; [2 pgs], Dedication to Héricart Ferrand de Thury, signed P. Brard.; [1]-688, Text.; [689]-696, "Explication | Des Planches."; [At end], 4 folding plates.

[Vol 2] [2 pgs], Half title page, "Minéralogie | Appliquée | Aux Arts," verso "Le nombre d'exemplaires prescrit par la loi aété | déposé. Tous les exemplaires portent la signature de | l'editeur."—signed in ink, "B.G. Leurauld."; [2 pgs], Title page, verso blank.; [1]-484, Text.; [485]-491, "Explication | Des Planches."; [1 pg], Blank.; [At end], 3 folding plates.

[Vol 3] [2 pgs], Half title page, "Minéralogie | Appliquée | Aux Arts," verso "Le nombre d'exemplaires prescrit par la loi aété | déposé. Tous les exemplaires portent la signature de | l'editeur."—signed in ink, "B.G. Leurauld."; [2 pgs], Title page, verso blank.; [1]-417, Text.;

BRAUNS

[418]-431, "Explication | Des Planches."; [433]-524, "Table Alphabétique | Des Matières."; [At end], 8 folding plates.

PLATES: [Vol 1] Plates 1,2 & 4 show apparatus, while plate 3 shows crystal drawings. [Vol 2] All plates show apparatus. [Vol 3] Plates 1 to 6 & 8 show apparatus, while plate 7 is hand-colored and shows cut gemstones.

VERY SCARCE. A very detailed, comprehensive economic mineralogy, providing descriptions, uses, sources, extraction techniques of a large number of minerals substances. Includes are all variety of metals, ores, ornamental stones, etc.

REFERENCES: *Freilich Sale Catalog*: no. 87. • Roller & Goodman, *Catalogue*, 1976: 1, 161. • Sinkankas, *Gemology Bibliography*, 1993: no. 898.

795. — French, 1826 [First edition].

Minéralogie populaire, ou Avis aux cultivateurs et aux artisans, sur les terres, les pierres, les sables, les métaux et les sels qu'ils emploient journellement, le charbon de terre, la tourbe, la recherche des mines, etc., par C.-P. Brard... Paris, L. Colas, 1826.

18°: 102 p. VERY SCARCE.

796. Another issue, 1828: *Minéralogie populaire, ou Avis aux cultivateurs et aux artisans, sur les terres, les pierres, les sables, les métaux et les sels qu'ils emploient journellement, le charbon de terre, la tourbe, la recherche des mines, etc.*, par C.-P. Brard... Paris, L. Colas, 1828.

18°: 108 p. RARE.

Reissued: Paris, 1830 and Paris, 1832.

Bruxelles imprint, 1835: *Minéralogie populaire, ou avis aux cultivateurs et aux artisans par C. P. Brard ...* Bruxelles, 1835. 8°: 98 p.

797. Polish transl., 1827: *Mineralogia popularna albo przestrogi dla rolników i rzemieślników, o ziemiach, kamieniach, piaskach, metallach i solach, których codziennie używają, tudzież o węglu ziemnym, torfie itd. przeł. z franc. i zastosowane do krajowych okoliczności przez A. Kumelskiego*. Wilno: A. Marcinkowski, 1827.

16°: 92 p.

RARE. Translation by Norbert Alfons Kumelski of the Brard's *Minéralogie Populaire* (Paris, 1826).

Norbert Alfons Kumelski. (BORN: Volhynia District, Poland, 6 June 1802; DIED: 1853) *Polish mineralogist*. Kumelski completed his studies at the Mathematic-Physical and Medical Faculty of the Wilno University. From 1829 to 1833 he studied in Germany and Austria, then he moved to Warsaw not later than in 1841.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 340 & no. 1700. (Kumelski)

798. — French, 1833.

Description historique d'une collection de minéralogie appliquée aux arts, par C.-P. Brard,... Paris, F.-G. Levrault, 1833.

8°: viii, 79 p. VERY SCARCE.

REFERENCES: Partsch, *Katalog der Bibliothek*, 1851: no. 464.

BRAUNS, Johannes Ernstus.

799. — German, 1726.

Johannes Ernesti Brauns Cher: Zellerf: J.V.P. ... *Amoenitates Subterraneæ, id est, Breviarium Sufficiens Physico-Juridico-Historicum, quod agit de Metall-Fossilinarum Harcicarum, cum Inferiorum, zum Superiorum, Prima Origine, Progressu atque*

Præstantia ... Goslariensis, Johannis Christophori König, 1726.

4°: [8], 60 p., 3 plates. RARE.

REFERENCES: BMC: 1, 226. • Hoover Collection: no. 165. • LKG: XIV 157.

BRAUNS, Reinhard Anton. (BORN: Eiterfeld near Kassel, Germany, 20 August 1861; DIED: Bonn, Germany, 28 January 1937) *German mineralogist, petrologist & gemologist*.

Brauns attended the University of Marburg from 1881 to 1885, receiving his Ph.D in 1884. From 1883 to 1894 he was an assistant at the Mineralogical Institute in Marburg. In 1894, Brauns was appointed ordinary professor of mineralogy and geology at the technical high school in Karlsruhe, but in 1895 he took a similar post at the University of Giessen. In 1904 Brauns moved on to the University at Kiel, Germany, and in 1907 to the University of Bonn where he spent the remainder of his life. Brauns was a founding member of the Deutsche Mineralogische Gesellschaft, as well as an honorary member of many other societies. He was an editor of the *Neues Jahrbuch für Mineralogie und Geologie* and the *Zeitblatt für Mineralogie*. His major theoretical work centers upon the optical anomalies in crystals, chemical mineralogy and the production of synthetic gemstones.

REFERENCES: *American Mineralogist*: 23 (1938), no. 3, 131-3, portrait. • Cleavelly, *World Palæontological Collections*, 1983: 65. • DBA: II 171, 136-147. • *Mineralogical Magazine*: 25 (1939), no. 165, 2 284-5, portrait. • NDB: 2, 562 [by W. Fischer]. • Poggendorff: 4, 177, 5, 161-2 & 6, ??? • Sarjeant, *Geologists*, 1980: 2, 614 & Suppl. 2 (1995), 1, 461. • WBI. • *World Who's Who in Science*: 234. • *Zentralblatt für Mineralogie*: A (1937), no. 4, 97-102, portrait.

800. — German, 1891.

Die | Optischen Anomalien | Der Krystalle | von | Dr. Reinhard Brauns, | Privatdocenten An Der Universität Marburg. | [...2 lines of quotation, signed Goethe...] | Mit Sechs Tafeln. | Gekronkte Preisschrift. | [tapered rule] | Leipzig | Bei S. Hirzel | 1891.

8°: [i]-xi, [1], [1]-370 p. PAGE SIZE: 270 x 180 mm.

CONTENTS: [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso "Auf die von der ..."; [v]-viii, "Vorwort."—signed R. Brauns, September 1891.; [vi]-xi, "Inhalt."; [1 pg], "Abkürzungen."; [1]-362, Text.; [363]-368, "Erklärung der Abbildungen."; [369]-370, "Register."

VERY SCARCE. A prize winning essay extending the pioneer work of Mallard on optical anomalies. It is a compendium of all known facts about optical crystal anomalies. Divided into two major parts, the first of which develops the subject through an historical review recalling the work of Mallard, Brewster, Biot, Scacchi, Neumann, among others (pp. 5-56). The second part describes optical anomalies Brauns had observed in a large variety of minerals (pp. 57-362).

REFERENCES: BMC: 1, 226. • NUC.

801. — German, 1896.

Chemische Mineralogie | Von | Dr. Reinhard Brauns | O. Professor Der Mineralogie Und Geologie An Der Universität Giessen. | [rule] | Mit

32 Abbildungen Im Text. | [ornament] | Leipzig |
Chr. Herm. Tauchnitz | 1896.

8°: [i]-xiii, [3], [1]-460 p., 32 illus. PAGE SIZE: 232 x 154 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte..."; [iii], Dedication to Max Bauer.; [iv], Blank.; [v], "Vorwort."; [vi], Blank.; [vii]-xiii, "Inhalt."; [1 pg], "Abkürzungen in den Citaten."; [1 pg], Sectional title page, "Chemische Mineralogie."; [1 pg], Blank.; [1]-447, Text.; 448, "Nachtrage."; [449]-460, "Register."

VERY SCARCE. Written for both the student and instructor in mineralogy, this text focuses on the chemical qualities of minerals and their corresponding importance in mineralogy. Topics covered include molecular combinations, processes and environments of mineral formation, crystal structure, relationships between chemistry and crystal form, the effects of chemistry on the physical properties of minerals, and theories on the formation of minerals in nature.

Contents: I. Die Bestandtheile der Mineralien und ihre Ermittlung. II. Der Aggregatzustand der Mineralien und seine Aenderung. III. Die Form der Mineralien und das Wachsen der Krystalle. IV. Beziehungen zwischen der Form und der chemischen Zusammensetzung der Krystalle. V. Die Nachbildung der Mineralien. VI. Die Entstehung der Mineralien in der Natur. VII. Die Verwitterung der Mineralien. VIII. Die Constitution der Mineralien.

REFERENCES: BMC: 1, 227. • NUC.

802. — German, 1893 [First edition].

Sammlung Göschen | [rule] | Mineralogie |
von | Dr. R. Brauns | Privatdocent und der
Universität Marburg | [rule] | Mit 130 Abbildungen
| [ornate rule] | Stuttgart | G.J. Göschen'sche
Verlagsbuchhandlung | 1893.

8°: 126 p., 130 illus.

VERY SCARCE. This short introductory text to mineralogy includes general discussions of mineralogical form and physical and chemical properties, followed by a descriptive mineralogy that lists the most common species.

REFERENCES: BMC: 1, 226. • NUC.

803. 3rd edition, 1905: Mineralogie ... Mit 132 Abbildungen. Dritte, verbesserte Auflage. Leipzig, G.J. Göschen'sche Verlagshandlung, 1905.

12°: 134, [5] adverts., [1] p., text illus. PAGE SIZE: 152 x 114 mm.

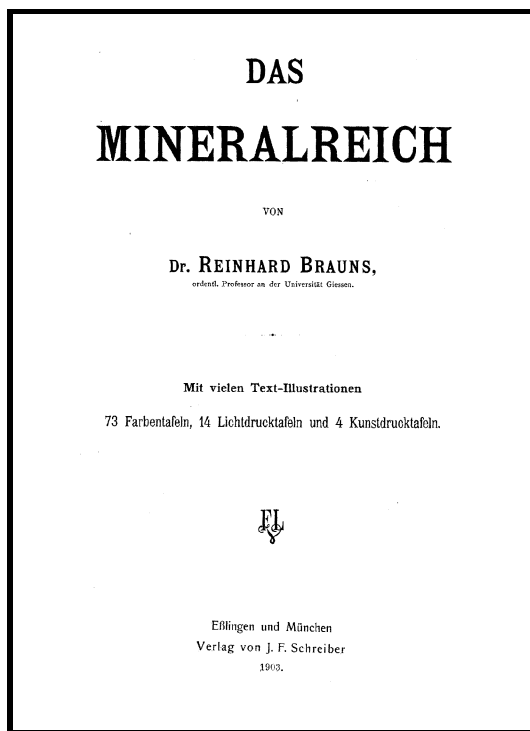
VERY SCARCE. A simple introduction to mineralogy, beginning with theory and terminology and ending with descriptions.

804. Spanish transl., 1927: [In black:] R. Brauns | [in red:] Mineralogia | [in black:] Traducción del | Prof. M. San Miguel De La Cámara | De la Universidad de Barcelona | [rule] | Editorial Labor, S.A.: Barcelona - Buenos Aires.

8°: [1]-208, [2] p., 12 plates on six leaves, 20 photos, 132 illus. Title page in red and black. Published as: *Ciencias Naturales*, Sección XII, N° 135. PAGE SIZE: 182 x 118 mm.

CONTENTS: [1-2], Half title page, "Mineralogía," verso series title page, "Colección Labor | ..."; [3-4], Title page, verso "... 1927 | [rule] | Es Propiedad | ..."; [5]-6, "Índice."; [7]-199, Text.; [200], Blank.; [201]-202, "Bibliografía."; [203]-208, "Índice Alfabético."; [1 pg], "Ilustraciones."; [1 pg], Blank.; [Plates]; [1 pg], "Talleres Tipográficos de Editorial Labor, S.A."; [1 pg], Blank.

VERY SCARCE. Spanish translation by San Miguel De La Cámara of Braun's *Mineralogie*.



DAS MINERALREICH, 1903

REFERENCES: BL. • NUC.

805. — German, 1903 [First edition, issue A].

Das | Mineralreich | von | Dr. Reinhard Brauns,
| ordentl. Professor an der Universität Gießen.
| [ornate rule] | Mit vielen Text-Illustrationen
| 73 Farbentafeln, 14 Lichtdrucktafeln und 4
Kunstdrucktafeln. | [Ornament incorporating the
initials F L V] | Eßlingen und München | Verlag
von J.F. Schreiber | 1903.

4°: [2], 4, [3], 6-440, [8] p., 93 plates (73 colored), 275 figs (photos, line drawings). PAGE SIZE: 300 x 225 mm.

VERY SCARCE. A classic work in popular mineralogical literature. Braun's *Das Mineralreich* is a large format, ambitious book sought after today for its c900 color illustrations that show the most important minerals in their natural form, color, and size on 73 chromolithographic and 14 black and white plates. But when Brauns wrote the book, he was at the pinnacle of his profession, and the text reflects his deep love and technical knowledge of minerals, which surprisingly can still be read with interest, especially for the details on old European localities. However, the text is now largely overlooked and thought to be obsolete due to the incorporation in the book of the chromolithographic plates.

These plates were at their publication a sensation for their quality. It required much planning and great

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technical and artistic ability to produce the illustrations that were modeled on actual specimens. So that no damage would occur from transport, minerals from various private and publish European collections were carefully packed and hand delivered to the Schreiber's studios in Stuttgart. Gustav Seligmann [1849-1920] whose collection was renowned for the aesthetic quality of its specimens was a strong supporter of the project with 132 of the depicted pieces being from his collection. Seligmann's collection was later incorporated into the Carl Bosch [1874-1940] collection, which was ultimately purchased in 1966 by the U.S. National Museum (Smithsonian Institution) in Washington. Today, the Seligmann specimens that are identifiable from the plates are especially noted within the collection. Good quality specimens were essential because the plates were intended to be easily recognizable to collectors. Medenbach notes that comparison between the actual specimens with the plates show that the manual work was implemented with much love and care, although some details were not included. Even without the lack of detail, the objective of depiction was met with species easily distinguished. Unfortunately, Braun's *Mineralreich* was among the last mineralogical works to be illustrated by the chromolithographic process. Technical advances in color photography and printing would soon supplant the labor intensive lithographic process.

This first edition was originally issued in 30 parts or "Lieferungen," presumably to allow the publisher to begin recovering costs for a very expensive production, and allow the buyers to acquire an expensive volume through a subscription spread over months. At the conclusion of publication, the 30 parts could then be bound into a single volume. That it was a successful venture is displayed by the appearance of other German editions, and translations sponsored by the publisher utilizing the same plates into English, Italian, Czech and Russian.

REFERENCES: Dana's 7th (Bibliography): 67. • *Freilich Sale Catalog*: no. 90. • Medenbach, O., "Der Brauns," *Magma*, 1 (1983), no. 1, 27-30. • Sinkankas, *Gemology Bibliography*, 1993: no. 903.

806. First edition, issue B, 1912: Das | Mineralreich | von | Dr. Reinhard Brauns | ordentl. Professor an der Universität Bonn | [ornate rule] | Mit vielen Text-Illustrationen | 73 Farbentafeln, 14 Lichtdrucktafeln und 4 Kunstdrucktafeln. | Unveränderter Neudruck | Eßlingen und München | Verlag von J.F. Schreiber | 1912.

4°: [4], 440, [6] p., frontispiece, 91 plates (73 chromolithographic).

VERY SCARCE. After the original 30 Lieferungen were issued, the publisher reissued the book. However, to make a cheaper edition, they made the unfortunate decision to use steel staples to bind the sections. Over time, these sections will become loose and even come apart. In addition, a cheaper grade of paper seems to have been used for printing the text.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 908.

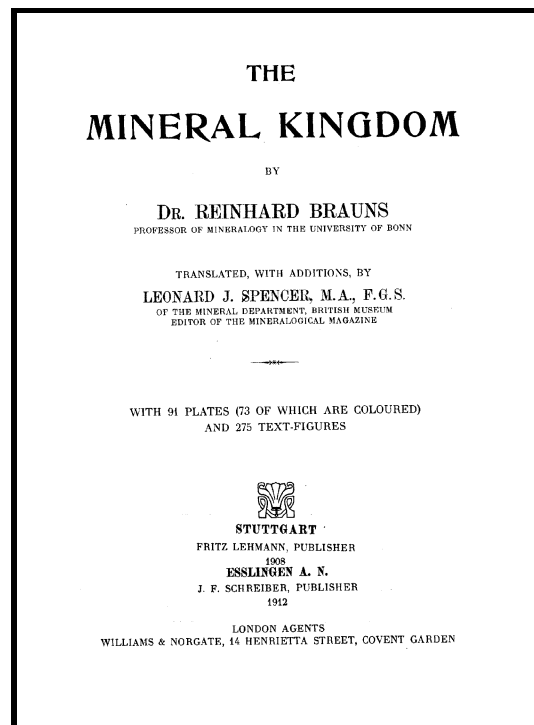
807. First edition, issue C, 1923: Das | Mineralreich | von | Dr. Reinhard Brauns | ordentl. Professor an der Universität Bonn | [ornate rule] | Mit vielen Text-Illustrationen | 73 Farbentafeln, 14 Lichtdrucktafeln und 4 Kunstdrucktafeln.

| Unveränderter Neudruck | Eßlingen und München | Verlag von J.F. Schreiber | 1923.

4°: [4], 440, [6] p., frontispiece, 91 plates (73 chromolithographic).

VERY SCARCE. Reissue of the 1912 edition with a new title page.

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 909.



THE MINERAL KINGDOM, 1908

808. Translation, issue A, 1908-12: The | Mineral Kingdom | By | Dr. Reinhard Brauns | Professor Of Mineralogy In The University Of Bonn | Translated, With Additions By | Leonard J. Spencer, M.A., F.G.S. | [...2 lines of titles...] | [ornate rule] | With 91 Plates (73 Of Which Are Coloured) | And 275 Text-Figures | [ornate rule] | Stuttgart | Fritz Lehmann, Publisher | 1908 | Esslingen A.N. | J.F. Schreiber, Publisher | 1912 | London Agents | Williams & Norgate, 14 Henrietta Street, Covent Garden.

4°: [4], 432 p., frontispiece, 91 plates (73 chromolithographic) each with descriptive letterpress.

VERY SCARCE. This is the famous English translation done by LEONARD JAMES SPENCER of Braun's *Das Mineralreich* (1st ed., Eßlingen und München, 1903), which utilizes the original German chromolithographic plates. The best English mineralogist of his time, Spencer has performed a splendid translation of Braun's text, adding his own notes, which like the German edition, became a popular mineralogical work in England.

REFERENCES: Dana's 7th (Bibliography): 67. • *Freilich Sale Catalog*: no. 92. • NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 907.

809. Translation, issue B, 1912: The | Mineral Kingdom | By | Dr. Reinhard Brauns | Professor Of Mineralogy In The University Of Bonn | Translated, With Additions By | Leonard J. Spencer, M.A., F.G.S. | [...2 lines of titles...] | [ornate rule] | With 91 Plates (73 Of Which Are Coloured)

| And 275 Text-Figures | [ornament] | Esslingen A.N. | J.F. Schreiber, Publisher | 1912 | London Agents | Williams & Norgate, 14 Henrietta Street, Convent Garden.

4°: [4], 432 p., frontispiece, 91 plates (73 colored) each with descriptive letterpress.

VERY SCARCE. Apparently, the publisher took his remaining stock of plates and text, and reissued the work with a new title page.

REFERENCES: NUC.

810. American issue, 1912: The | Mineral Kingdom | By | Dr. Reinhard Brauns | Professor Of Mineralogy In The University Of Bonn | Translated, With Additions By | Leonard J. Spencer, M.A., F.G.S. | Assistant In The Mineral Department Of The British Museum | [ornate rule] | With 91 Plates (73 Of Which Are Coloured) | And 275 Figures In The Text | Philadelphia | J.B. Lippincott Company | London: Williams And Norgate | 1912.

4°:

VERY SCARCE. American issue of the Spencer translation, which is suprisingly scarce.

REFERENCES: NUC.

811. Italian transl., 1905: Dott. Reinhard Brauns | Professore di Mineralogia nell'Univ. di Giessen | [rule] | II | Regno Minerale | [rule] | Traduzione | Con | Note Ed Aggiunte | Per II | Prof. Ettore Artini | [...2 lines of titles and memberships...] | [rule] | Con 275 figure nel testo e 91 tavole in nero e a colori | [rule] | Casa Editrice | Dottor Francesco Vallardi | Milano | Roma - Napoli - Torino - Genova - Firenze - Bologna | Pisa - Catania - Bari - Pavia - Cagliari - Sassari - Padova - Palermo | [rule] | Trieste - Buenos Ayris - Alessandria d'Egitto.

4°: PAGE SIZE: 320 x 220 mm.

SCARCE. Translation by ETTORE ARTINI of *Das Mineralreich* (1st ed., Esslingen und München, 1903).

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 904 [not seen].

812. Czech transl., c1905: Říše Nerostná | Obrazem I Slovem. | Pro Všechny Kruhy Vzdělaného Obecnstva | Českého | Dle Stejnomeného Spisu | Prof. Dra R. Braunse | Se Zřetelem K Domácím Poměrům | Upravit | Jan John, | Ředitel C.K. Reálky V Táboře. | [rule] | Text. | [rule] | [ornament] | V Praze. | Nakladatel Jos. R. Vilímek, | Spálená Ulice Číslo 13 Nové.

Text and atlas vols. [Text] 4°: π⁶ 1-674; 274ℓ.; [12], 1-529, [7] p. [Atlas] 4°: π⁴ [82 leaves of plates, with interspersed letterpress descriptions]; [8] p., 82 chromolithographic plates, each with descriptive letterpress. PAGE SIZE: 288 x 214 mm.

CONTENTS: [Text] [2 pgs], Half title page, "Říše Nerostná | Obrazem I Slovem," verso blank.; [2 pgs], Title page, verso "Tiskem UNIE v Praze."; [3 pgs], "Předmluva."—signed Jan John.; [1 pg], Blank.; [3 pgs], "Obsah."; [1 pg], Blank.; 1-529, Text.; [4 pgs], "Ukazovatel Nerostů" [Index to minerals mentioned]; [2 pgs], "Ukazovatel Znaků Nerostných." [Index to localities of mineral occurrences]; [1 pg], "Opravy A Dodatky" [Errata].

[Atlas] [2 pgs], Half title page, Říše Nerostná | Obrazem I Slovem," verso blank.; [2 pgs], Title page, verso "Tiskem UNIE v Praze."; [1 pg], "Atlas Nerostů."; [1 pg], Blank.; [2 pgs], "Seznam Tabulí."; [At end], 82 plates, each with descriptive letterpress.

VERY SCARCE. Translation by Jan John of *Das Mineralreich* (Eßlingen und München, 1912).

Jan John. (BORN: Žmutice, Czech Republic, 1850; DIED: Tábor, Czech Republic, 1920) *Czech naturalist*. John worked as an instructor in various grammar schools before becoming the director of the grammar school at Tábor. He authored several books in the Czech language on natural history subjects. John studied mainly parasitic worms, but he also authored an atlas about butterflies, flowers and minerals, which is excellent.

ЦАРСТВО МИНЕРАЛОВЪ.

ОПИСАНИЕ ГЛАВНЫХЪ МИНЕРАЛОВЪ, ИХЪ МѢСТОРОЖДЕНІЯ
И ЗНАЧЕНІЕ ИХЪ ДЛЯ ПРОМЫШЛЕННОСТИ.

ДРАГОЦѢННЫЕ КАМНИ.

СОЧИНЕНІЕ Д-РА Р. Браунса,
профессора Вюртембергскаго Университета.

Переводъ съ нѣмецкаго В. Н. Лемана
съ дополненіями относительно Россіи А. П. Нечаева и П. П. Сучинскаго.

Подъ общей редакціей заслуженнаго профессора С.-Петербургскаго Университета,
д-ра А. А. Иностранцева.

Со мною подписывались въ текстѣ, 73 таблицами въ краскахъ
и 18 фомоніями.



С.-ПЕТЕРБУРГЪ.
Изданіе А. Ф. Девріена.
1904.

TSARSTVO MINERALOV, 1904

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 905 [not seen]. (John) Personal communication [Petr Sztacho and Martin Bohatý, 2002].

813. Russian transl., 1904: Царство | Минераловъ | Описание Главныхъ Минераловъ, ихъ Мѣсторожденія | И Значеніе Ихъ Для Промышленности. | [short rule] | Драгоценные Камни. | [short rule] | Сочиненіе д-ра Р. Браунса, | [...one line of titles...] | Переводъ съ нѣмецкаго В.Н. Лемана | съ дополненіями относительно Россіи А.П. Нечаева и П.П. Сучинскаго. | Подъ общей заслуженнаго профессора С.-Петербургскаго Университета, | д-ра А.А. Иностранцева. | [short rule] | Со мноюму нолумундхсаму бѣ мексмѣ, 73 маблущаму бѣ краскахъ | у 18 фомомуніи. | [ornament] | С.-Петербургъ | Изданіе А.Ф. Девріена. | 1904.

[TRANSLITERATED TITLE:]

Tsarstvo Mineralov. St. Petersburg, Deyvrena, 1904.

4°: π⁹ 1-634 642; 263ℓ.; [2], I-XV, [1], [1]-507, [1] p., 83 chromolithographic plates. PAGE SIZE: 268 x 198 mm.

CONTENTS: [2 pgs], Title page, verso "Дозволено Пензурою. С.-Петербургъ, 9 апрѣля 1904 г."; [I], "Предисловіе Редакціи."—signed А. Иностранцевъ., 20 Марта 1904."; [II], Blank.; [III]-[IV], "Отъ Издателя."; [V]-[VII], "Предисловіе автора."—signed Reinhard Brauns, 15 Сентврі 1903.; [VIII], Blank.; [IX]-[XI], "Оглавленіе Таблицъ."; [XII], Blank.; [XIII]-[XV], "Оглавленіе."; [1 pg], Blank.; [1]-487, Text.; [488]-497, "Предметный Указатель."; [498]-507, "Географическій указатель Мѣсторожденій."; [1 pg], "Замѣуенныя Опечатки."

RARE. Translation by ??? of *Das Mineralreich* (Eßlingen und München, 1903). It contains the identical

BRAVAIS

plates as those of the German editions with the same imprint information seen at the bottom of each plate. Descriptions of the plates are supplied on onion skin paper descriptive letterpress in Cyrillic type.

REFERENCES: *Freilich Sale Catalog*: no. 91. • Sinkankas, *Gemology Bibliography*, 1993: no. 906 [not seen].

814. — German, 1922.

Die Mineralien | der Niederrheinischen Vulkangebiete | Mit besonderer Berücksichtigung | ihrer Bildung und Umbildung | Mit Unterstützung der Rheinischen Gesellschaft für wissenschaftliche Forschung | verarbeitet von | Dr. Reinhard Brauns | ordentl. Professor der Mineralogie und | Petrographie an der Universität Bonn | Mit 40 Tafeln, 3 Porträts und 32 Figuren im Text | [ornament] | Stuttgart 1922 | E. Schweizerbart'sche Verlagsbuchhandlung (Erwin Nägele).

4°: vii, 225 p., 40 plates, 3 portraits, 32 text illus.

VERY SCARCE. A monograph on the minerals found in the ancient Niederrhein volcanic region of Germany.

REFERENCES: Dana's 7th (Bibliography): 67.

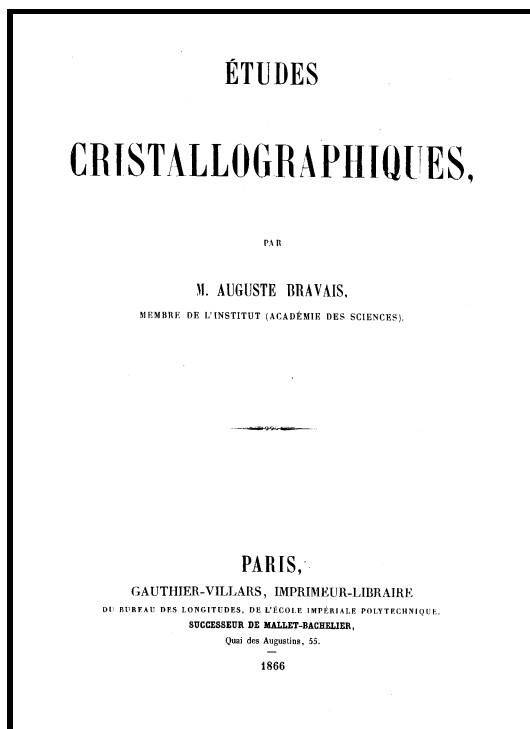
BRAVAIS, Auguste. (BORN: Annonay, France, 23 August 1811; DIED: Le Chesnay, France, 30 March 1863) *French crystallographer, botanist, astronomer & physicist.*

Bravais received a classical education at the *Collège Stanislas* in Paris, graduating in 1827. In 1829, he won first prize in mathematics in a general competition and was accepted to the *École Polytechnique*. He was first in his class at the end of the first year which made him eligible to select any technical field except mining. Since his passion from youth was to explore the world, he chose to enter the French navy. In 1832, Bravais shipped out. He sailed the Mediterranean and in April of that year was assigned to map the coast of Algeria. The first of many expeditions he would accompany. Several important publications on plant organography won him membership in the *Société Philomathique de Paris* in 1835. On an extended assignment in Norwegian Lapland from 1838 to 1839, Bravais made numerous observations in astronomy, meteorology and terrestrial magnetism. Several years later in 1845, he accepted an appointment as professor of physics at the *École Polytechnique*. There, he became interested in symmetry and reticular groupings, sending several important papers to the *Académie des Sciences*. Among these were several important in the development of crystallography [which see below]. Bravais held membership in the *Académie Royale des Sciences, Belles Lettres et Arts de Lyons* and the *Académie des Sciences*.

REFERENCES: ABF: I 150, 23-28; 1054, 310. • *American Journal of Science*: Series 2, **36** (1863), 401-2. • Barr, *Index to Biographical Fragments*, 1973: 33. • *Bibl. Warsz.* • DBF: **7**, 170-1. • DSB: **2**, 430-1 [by A. Birembaut]. • Fruton, *Bio-Bibliography*, 1982: 92 [other refs.]. • *ISIS*, 1913-65: **1**, 190. • Lambrecht & Quenstedt, *Catalogus*, 1938: 56. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: **1**, 549. • Poggendorff: **1**, cols. 283-4 & **3**, 184-5. • Sarjeant, *Geologists*, 1980: **2**, 614-5. • Thomas, *Dictionary of Biography*, 1884: 429. • WBI. • *World Who's Who in Science*: 234.

815. — French, 1866.

Études | Crystallographiques, | Par | M. Auguste Bravais, | Membre De L'Institut (Académie Des



ÉTUDES CRYSTALLOGRAPHIQUES, 1866

Sciences). | [ornate rule] | Paris, | Gauthier-Villars, Imprimeur-Libraire | Du Bureau Des Longitudes, De L'École Impériale Polytechnique, | Successeur De Mallet-Bachelier, | Quai des Augustins, 55. | [rule] | 1866.

4°: [i]-lxii, [2], [1]-290 p., 13 plates. PAGE SIZE: 268 x 210 mm.

CONTENTS: [i-ii], Half title page, "Études | Cristallographiques," verso "Paris. — Imprimerie De Gauthier-Villars, Successeur De Mallet-Bacheijer. | ..."; [iii-iv], Title page, verso blank.; [v], "Avertissement."—signed "É.D.B." [Élie de Beaumont].; [vi], Blank.; [vii]-ix, "Fragment de l'Éloge historique d'Auguste Bravais, ..."; [x], Blank.; [xi]-xviii, "Note sur les polyèdres symétriques de la géométrie."; [xix]-lxii, "Mémoire sur les polyèdres de forme symétrique."; [one plate].; [1 pg], "Mémoire | sur | Les Systèmes Formés Par Des Points | Distribués Régulièrement Sur Un Plan Ou Dans L'Espace."; [1 pg], Blank.; [1]-287, Text.; [288], Blank.; 289-290, "Table Des Matières."

PLATES: Consist of reproductions from Bravais' various papers concerning crystallography. Consequently, the subjects deal with crystal drawings and diagrams.

RARE. A collected works of Bravais as it relates to crystallography to stand as his memorial to the science he contributed so much to. According to the advertisement, it was pulled together by ?? H. de Senarmont [????], and probably published by the Académie des Sciences in Paris. The preliminaries include a portion of Élie de Beaumont's eulogie to Bravais and a review of the importance of his contributions to crystallography. The text then reprints

several monographs that appeared decades before but that had a profound influence on crystallography in morphological and structural studies. At the conclusion of the volume are two papers by M. Cauchy [????] describing the importance of the previous reprints in crystallography.

"Beginning in 1848, Auguste Bravais wrote a series of papers in which he treated initially the types of geometric figures formed by points distributed regularly in space and then applied these considerations to crystals, with the points viewed as being the centers of gravity of the chemical molecules or as poles of forces. With this approach, Bravais was able to explain the cleavage and external symmetry of crystals as a function of the reticular density. Most important, Bravais demonstrated that there was a maximum of fourteen space lattices or groups of points differing by symmetry and geometry whose translational repetition in space maintained the symmetrical arrangements of the points of a unit cell. He perceived that these fourteen space lattices denoted seven different lattice symmetries which corresponded to the previously recognized seven crystal systems. Hence, the external symmetry became firmly grounded on the concept of the space lattice." (Burke).

German, 1890: A. Bravais' Abhandlungen über symmetrische polyeder. (1849) Uebersetzte und in gemeinschaft mit P. Groth herausgegeben von C. und E. Blasius. Mit 1 tafel. Leipzig, W. Engelmann, 1890. 50 p., diagrams on folding plate.

Published as *Ostwald's Klassiker der exakten Wissenschaften*, no. 17, this translation was edited by Eugen Heinrich August Blasius [1861-] and Paul Groth. It was first published under titles "Note sur les polyèdres symétriques de la géométrie" and Mémoire sur les polyèdres de forme symétrique" in the *Journal de mathématiques pures et appliquées*, par Liouville, 1849.

German, 1897: Abhandlung über die systeme von regelmässig auf einer ebene oder raum vertheilten punkten, von A. Bravais ... (1848) Uebersetzen und herausgegeben von C. und E. Blasius. Mit 2 tafeln. Leipzig, W. Engelmann, 1897. 142 p., 42 diagrams on 2 folding plates.

Published as *Ostwalds Klassiker der exakten Wissenschaften*, no. 90, first published in *Journal de l'École polytechnique*, tome 19. It formed part 2 of *Études Cristallographiques*, published in 1866. The present translation is based upon the 1866 edition.

English, 1949: On the systems formed by points regularly distributed on a plane or in space; translated by Amos J. Shaler. Crystallographic Society of America, 1949. viii, 113 p., diagrams.

Published as *The Crystallographic Society of America. Memoir*, no. 1. It is a translation of the original paper that first appeared as "Mémoire sur les systèmes formés par des points distribués régulièrement sur un plan ou dans l'espace" in *Journal de l'École polytechnique*, cahier 33, tome XIX, pages 1-128, Paris, 1850.

REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: p. 171. • Dana's 7th (Bibliography): 67. • (German, 1897) Roller & Goodman, *Catalogue*, 1976: 1, 162.

BRAYNE, Johann Philipp.

See: Breyne, Johann Philipp.

BREDSORFF, Jacob Hornemann. (BORN: Skjerninge, Denmark, 8 March 1790; DIED: Skjerninge, Denmark, 16 June 1841) *Danish mineralogist.*

Bredsdorff worked first as an adjunct at the Cathedral-School in Røskild, before becoming a lecturer on mineralogy at the University of Copenhagen in 1823. In 1828, he became lecturer on botany and mineralogy at the Academy in Sorø.

REFERENCES: *Dansk Biografisk Haandleksikon*: 1, 221, portrait. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 220-22, portrait. • Poggendorff: 1, cols. 286-7. • SBA: Scandinavian Biographical Archive: A-38, 241-255. • WBI.

816. — Latin, 1827.

De Notione Speciei | In | Regno Minerali. | [tapered rule] | Scripsit | Jacobus Hornemann Bredsdorff, | Dr. Phil. Mineral. Lector Publ. | [double rule] | Hafniæ MDCCCXXVII. | Typis Directores Jani Hostrup Schulzii, | Aulæ Et universitatis Typographie.

8°: [4], 104 p.

VERY RARE. This work records the author's notion of what constitutes a distinct species in the kingdom of minerals.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 139-40. • BL: [7104.aa.5.]. • BMC: 2, 228.

BREISLAK, Scipione. (BORN: Rome, Italy, 1750; DIED: Naples, Italy, 15 February 1826) *Italian geologist.*

Breislak, who was of German descent, was professor of physics at the University of Ragusa, and subsequently at the Collegio Nazareno in Rome. He fled to France following a revolution, but returned to Italy working for Napoleon in the manufacture of gunpowder and later the manufacture of alum.

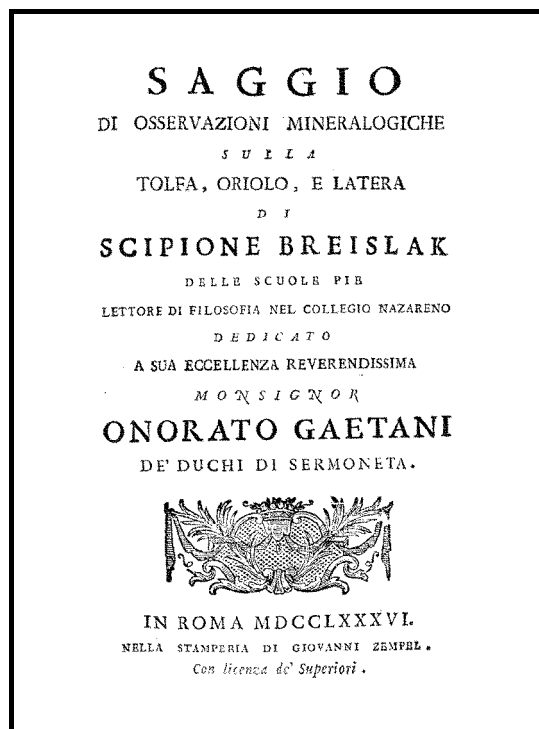
REFERENCES: ABI: I 201, 121; II S 14, 89-90. • Barr, *Index to Biographical Fragments*, 1973: 33. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • Configliachi, L.A., *Memorie Intorno alle Opere ed agli Scritti del Geologo Scipione Breislak*. Padua, 1827. 28 p. • DSB: 2, 439-40 [by V. Francani]. • *Encyclopaedia Britannica*, 11th edition. • Lambrecht & Quenstedt, *Catalogus*, 1938: 57. • Poggendorff: 1, col. 288. • Sarjeant, *Geologists*, 1980: 2, 616 & 1, 311. • WBI. • *World Who's Who in Science*: 236.

817. — Italian, 1786.

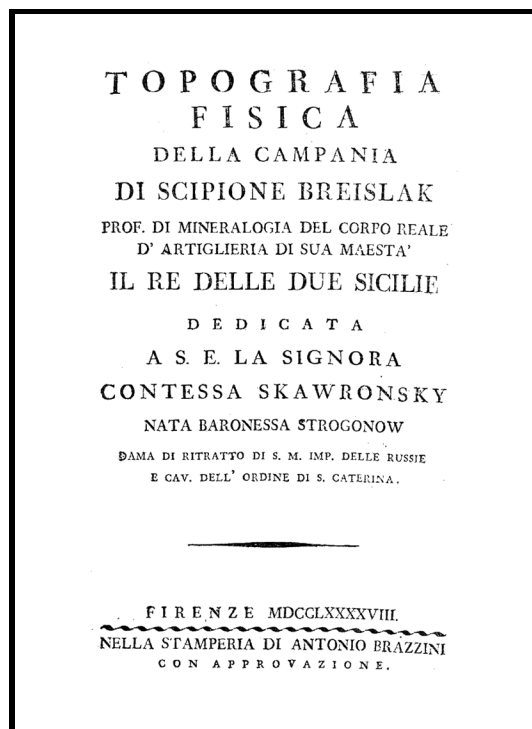
Saggio | Di Osservazioni Mineralogiche | Sulla | Tolfa, Oriolo, E Latera | Di | Scipione Breislak | Delle Scuole Pie | Lettore Di Filosofia Nel Collegio Nazareno | Dedicato | A Sua Eccellenza Reverendissima | Monsignor | Onorato Gaetani | De' Duchi Di Sermoneta. | [ornament] | In Roma MDCCCLXXXVI. | Nella Stamperia Di Giovanni Zemple. | Con licenza de' Superiori.

8°: xvi, 110 p., ornament on title page, a few decorative initials.

RARE. This is a descriptive account of the natural resources of the West central region of Italy, and the mining areas of Tolfa, Oriolo-Romano, Civitavecchia, and Latera. After his appointment as a professor at the Collegio Nazareno, Breislak spent his leisure time in geological researches in the papal states. His account of the aluminous district of Tolfa and adjacent hills, published in 1786 as *Saggio di Osservazioni Mineralogiche sulla Tolfa* gained for him the notice of the King of Naples. He was invited by the King to inspect the mines and related works in that kingdom,



SAGGIO, 1786



TOPOGRAFIA, 1798

which led to his appointment as professor of mineralogy to the royal artillery.

REFERENCES: BL: [967.i.23.(2.)]. • LKG: XIV 540.

818. — French, 1792 [French transl.].

Essais Mineralogiques sur la Solfatare de Pouzzole par Scipion Breislak ... Traduit de Manuscrit Italien par Francois de Pommereul ... Naples, Chez Janvier Giacco, 1792.

8°: 240, [2] p.

VERY SCARCE. Translation by Baron de François René Jean Pommereul [which see note] from an otherwise (?) unpublished manuscript. In the volcanically active district of Solfatara near Naples, mining and extraction of alum had probably occurred since ancient times. However, it was under Breislak's direction as inspector of mines for the Kingdom of Naples that a vast works for the mining and refining of sulphur was established. Sulphur being an important component of gun powder became an important economic factor in the Naples economy of the nineteenth century. In this *Essai*, Breislak describes the minerals of the area.

François René Jean Pommereul. (BORN: 1745; DIED: 1823) *French aristocrat & military officer.* General in Napoleon Bonaparte's campaigns of 1796-7.

REFERENCES: LKG: XIV 564. • Roller & Goodman, *Catalogue*, 1976: I, 163. • Ward & Carozzi, *Geology Emerging*, 1984: no. 308. (Pommereul) ABE: I 846, 181-239. • Beauchamp, *Biographie Moderne*, 1816. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hofer). • WBI.

819. — Italian, 1798 [First edition].

Topografia | Fisica | Della Campania | Di Scipione Breislak | [...2 lines of titles and memberships...] | Il Re Delle Due Sicilie | Dedicata | A S.E. La Signora | Contessa Skawronsky | Nata Baronessa Strogonow | Dama Di Ritratto Di S. M. Imp. Delle Russie | E Cav. Dell' Ordine Di S. Caterina. | [tapered rule] | Firenze MDCCLXXXVIII. | [wavy rule] | Nella Stamperia Di Antonio Brazzini | Con Approvazione.

8°: xii, 368 p.

RARE. The fossiliferous zone of Pietraroia has in the past been the subject of important scientific studies executed by foreign as well as Italian experts. The first researcher to become interested in the zone was the geologist Scipion Breislak. In his work entitled *Topografia fisica della Campania*, he cited for the first time the Pietraroia fish: "Above Cerretto rises the high mountain of Pietraroia, which is one of the peaks of Matese, very interesting for the materials it yields. This mountain in some parts of is composed of calcareous scissile rock with fish imprints. The hardness of the shale, however, and the multiplicity of the crystalline veins intersecting in all directions, are such that only with difficulty it is possible to have beautiful specimens. They are never of that beauty and precision that one observes in the fish fossils of Bolca."

REFERENCES: BL: [175.b.29.]. • LKG: XIV 541a.

820. French transl., 1801: Voyages | Physiques | Et

Lithologiques | Dans La Campanie; | Suivis D'Un Mémoire | Sur la Constitution physique de Rome; | Avec la Carte générale de la Campanie, d'après Zannoni; | celle des Cratères éteints entre Naples et Cumes; celle | du Vésuve, du Plan physique de Rome, etc. etc. | Par Scipion Breislak; | Traduits Du Manuscrit Italien, | Et Accompagnés De Notes, | Par le Général Pommereuil. | [rule] | [...2 lines of quotation, signed Pliny...] | [rule] | Tome Premier. [-Second] | [tapered rule] | Paris, | Dentu, Imprimeur-Libraire, Palais du Tribunat | galeries de bois, n.° 240. | [double rule] | An IX. (1801.)

2 vols. [VOL 1] 8°: [4], xvi, 300 p., one plate, 2 maps. [VOL 2] 8°: [4], 323, [1] p., one plate, 2 maps.

SCARCE. Translated by Baron de François René Jean Pommereuil [which see note] of *Topografia Fisica della Campania* (Firenze, 1798). This first edition if French acts like a second edition to the original work, having been enlarged and corrected by Breislak for the translator. Beyond that, Pommereuil has added useful and insightful notes to the original text, as well as several maps of the region.

The first great table is on strong paper and represents the region around to Naples; the others show the Vesuvio, the physical plant of the outskirts of Rome, the extinct craters of the vesuviana zone, the design of a machine realized from the author in the crater of a Solfatara and the crystallization of blocks of branch caused from the action of washes during the eruption of 1794. "In the 1794 Breislak witnessed the eruption of Vesuvius and made direct observations at the Fields Flegrei and Pozzuoli sulfur mines. Physical topography of the Campania, which discusses his studies on volcanoes, includes his opinion that the volcanic systems of Latium and Campania to were connected at the ancient volcano Roccamonfina, eruptive whose apparatus and washes he had discovered. Considered one of founders of vulcanology in Italy, Breislak was the first to determine that basaltic rocks to were of extrusive origin. He concluded that for to long Time Monte Sum, the second summit of Vesuvius, had been active until A.D. 79; that it had been eroded; and that the cone of Vesuvius had been set upon it within historical Time" (DSB, II, p. 439). "In 1801, Scipio Breislak published to descriptive and geological work on the Phlegraean fields, the extinct volcanoes near Rocca Monfina, on Mount Sum, Vesuvius, the Baiae, Procida and Ischia. This work comprises several maps, and is in many respects supplementary to Spallanzani's Travels. Breislak also contributed the first researches on the geology and stratigraphy of Rome, and of that part of the Apennines which surrounds the volcanic area of the Italian mainland" (K.A. von Zittel, History of Geology and Palaeontology, London, 1901, pp. 78-79). With wide final index of the matters. The Breislak, been born to Rome from Swedish, chierico father regular, was premature much in the studies, becoming teaching already in young age. In 1781 it was called to the college of Urbino, therefore it passed after some years to Rome to the Nazareno college, where it organized an important mineralogico cabinet. From 1787 it taught to Nola before, then to Naples. In 1798 it made return Rome, where it had important part in the formation of the republican government, of which minister of finances was name. Fallen the Republic Roman, one joined to the directed French troops to Marseilles. To Paris it had way to know the greatest French scientists of the age, between which Chaptal, Fourcroy and Cuvier. In 1802 it re-entered in Italy. In the '05 member of the Italian Real Institute was name and was already member of the Real Societies of London, Edinburgo, Berlin and Torino. In 1815 it founded, with to the Giordani and Mounts, the Italian Library. In the within of the controversy, that it then cracked the world of the geologic studies between the A.G. supporters Werner and those of J. Hutton, the position of the Breislak was much critic in the first comparisons of and far from the excesses of second (cfr. DBI, XIV, pp. 118-120).

H.J. Johnston-Lavis, Bibliography of volcanoes of the southern Italy, London, 1918, p. 47.

François René Jean Pommereuil. (BORN: 1745; DIED: 1823) *French aristocrat & military officer.* General in Napoleon Bonaparte's campaigns of 1796-7.

REFERENCES: BL: [970.e.17.]. • Johnston-Lavis, *Bibliography of Volcanoes*, 1918: p. 47. • LKG: XIV 542b. • Monglond, *La France Révolutionnaire*, 1930: 5, 618. • Roller & Goodman, *Catalogue*, 1976: 1, 163. • Ward & Carozzi, *Geology Emerging*, 1984: no. 309. • Zittel, *History of Geology*, 1901: p. 99. (Pommereuil) ABF: I 846, 181-239. • Beauchamp, *Biographie Moderne*, 1816. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

821. — German, 1802.

Physische und Lithologische Reisen durch Campanien nebst mineralogischen Beobachtungen über die Gegend von Rom von Scipio Breislak ... nach dem Franzosischen des Generals Pomereuil ins Deutsche übersetzt, mit Anmerkungen und Zusätzen versehen von Franz Ambros Reuss. Leipzig, Wilhelm Rein, 1802.

2 vols. [VOL 1] 8°: VIII, 247 p. [VOL 2] 8°: 236 p., 5 plates.

RARE. Translated by FRANZ AMBROSIUS REUSS from the outstanding French edition published under the title *Voyages Physiques et Lythologiques dans la Campanie* (Paris, 1801).

REFERENCES: Adams, *Birth and Development*, 1938: 320-1. • *Freilich Sale Catalog*: no. 94. • LKG: XIV 543c.

822. — Italian, 1802.

Memoria sulla fabbricazione e raffinazione de nitri da Scipione Breislak. Milano, Presso Pirotta e Maspero Stampatori-Librai in Santa Margarita, [1802].

8°: π^6 A-Q⁸ R¹⁰; 144 ℓ .; [i]-xii, [1]-273, [3] p.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-v, Dedication, signed Breislak.; [vi], Blank.; [vii]-xii, "Introduzione."; [1]-273, Text.; [1 pg], Errata.; [2 pgs], "Indice | De Capitoli."

RARE. In this memoir, Breislak describes the making and refining of saltpeter, a necessary component of gun powder manufacture.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 163.

823. — Italian, 1805.

Del salnitro e dell' arte del salnitrajo ... Milano, Presso Pirotta e Maspero, 1805.

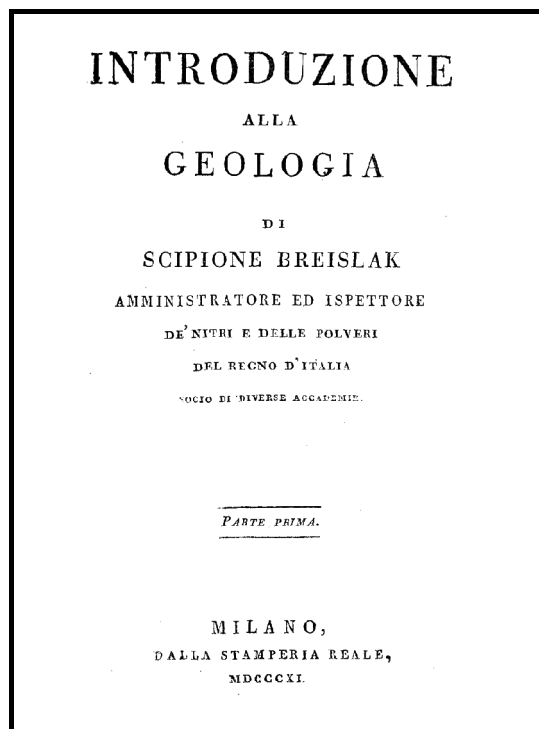
8°: viii, 240 p., 4 folding plates.

VERY SCARCE. A further study on the manufacture of saltpetre.

824. — Italian, 1811 [First edition].

Introduzione | Alla | Geologia | Di | Scipione Breislak | [...4 lines of titles and memberships...] | [rule] | Parte prima. | [rule] | Milano, | Dalla Stamperia Reale, | MDCCCXI.

2 vols. [VOL 1] 8°: [i]-xxvii, [1], [1]-36, [1]-367, [1] p. [VOL 2] 8°: [1]-490 p. Includes bibliographical references and index.



INTRODUZIONE ALLA GEOLOGIA, 1811

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii], Dedication to Giovanni Paradisi.; [iv], Blank.; [v]-xxvii, "Proemio."; [1 pg], Errata.; [1], "Tavola | Della | Principali Altezze | Del Globo."; [2], Blank.; [3]-4, "Avvertimento."; 5-33, Tables.; [34]-36, "Nota De Volcani."; [1]-367, Text.; [1 pg], "Indice De Capitoli." (=table of contents).
[Vol 2] [1-2], Title page, verso blank.; [3]-453, Text.; [454], "Indice De Capitoli." (=table of contents); [455]-490, "Indice" (=general index).

RARE. Celebrated first appearance of this important and influential geological textbook that according to Zittel contained Breislak's "able criticism of the Neptunian dogmas was largely instrumental in eradicating them from the teaching of the universities and colleges... Breislak gives a good account of volcanic phenomena and volcanic rocks in Italy, and contributes a number of valuable observations on gaseous explosions, volcanic ejecta, and on lava and basalt." It was translated into French and German shortly after publication. Breislak is considered one of the founders of volcanology in Italy. He was a critic both of the theories of Plutonism and of Neptunism.

REFERENCES: BL: [7107.bb.4.]. • DSB: 2, 439. • LKG: XIII 251. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 163. • Ward & Carozzi, *Geology Emerging*, 1984: no. 310. • Zittel, *History of Geology*, 1901.

825. French transl., 1812: Introduction a la Geologie, ou, A l'Histoire Naturelle de la Terre par Scipione Breislak ... Traduit de l'Italien par J.J.B. Bernard. Paris, J. Klostermann, 1812.

8°: x, 595 p.

RARE. Translated by J.J.B. Bernard from *Introduzione alla Geologia* (Milano, 1811).

REFERENCES: BL: [953.g.15.]. • LKG: XIII 252a.

826. — French, 1818.

Institutiones Géologiques | Par | Scipion Breislak | [...6 lines of titles and memberships...] | Traduites du manuscrit italien en français | Par | P.J.L. Campmas. | Trois volumes avec un atlas de 56 planches. | [rule] | Tome Primiero | [rule] | Milan | A l'Imprimerie Impériale Et Royale | 1818.

[TITLE OF ATLAS READS:]

Atlas géologique, ou vues d'amas de colonnes basaltiques, faisant suite aux Institutions géologiques. 1818.

3 vols. plus atlas. [Vol 1] 8°: xxix, [1], 468 p. [Vol 2] 8°: 550, [2] p. [Vol 3] 8°: [1]-557, [1] p. [Atlas] Oblong 2°: Engraved title page, 56 engraved plates. Includes bibliographical references and index (at the end of v. 3). VERY SCARCE.

CONTENTS: [Vol 1]

[Vol 2]

[Vol 3] [1-2], Title page, verso blank.; [3]-476, Text.; [476]-506, "Explication Des Planches."; [507]-509, "Table Des Chapitres | Du Troisième Volume."; [510]-557, "Table Des Principales Matieres" (=index).; [1 pg], "Errata."

[Atlas] 8°: [2] p., 56 plates.

REFERENCES: NUC: 74, 130. • Roller & Goodman, *Catalogue*, 1976: 1, 163.

827. 1822: Traité | Sur La | Structure Extérieure | Du Globe, | Ou | Institutions Geologiques, | Par | Scipion Breislak, | Membre de plusieurs Academies. | Trois Volumes avec un Atlas de 56 planches. | [wavy rule] | Tome Premier. | [wavy rule] | Paris, | Chez Fantin et Comp. | Bachelier, quai des Augustins. | Deterville, rue haute feuille. | Delaunay, Palais Royal. | 1822.

3 vols. and oblong folio atlas. [VOL 1] 8°: [VOL 2] 8°: [VOL 3] 8°:

RARE. A reissue of *Institutiones géologiques*, first published in 1819. With a new titlepage and an additional preface by the publisher, Jean-Pierre Giegler. The atlas bears the date 1818.

REFERENCES: BL: [445.b.3-6.].

828. — Italian, 1822 [First edition].

Descrizione Geologica | Della | Provincia Di Milano | Pubblicata | Per Ordine Dell'I. R. Governo | Di Lomardia | Da | Scipione Breislak | [...3 lines of titles and memberships...] | [ornate rule] | Milano | Dall' Imperiale Regia Stamperia | 1822.

8°: [i]-xlix, [1]-260 p., one large folding map. Includes index.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-xlix, "Introduzione."; [1 pg], Blank.; [1]-214, Text.; [215]-243, "Appendix."; [244], "Indice De Capitoli" (=table of contents).; [245]-260, "Indice" (=general index).; [At end], One large folding map.

VERY SCARCE. Subject Geology – Italy – Milan.

REFERENCES: BL: [728.h.29.].

Beiträge zur Mineralogie von Italien. (Frankfurt am Mainz, 1789).

See: *Beiträge Zur Mineralogie*.

BREITHAUP, Johann August Friedrich. (BORN: Probstzella, Germany, 16 May 1791; DIED: Freiberg, Germany, 22 September 1873) *German mineralogist*.

Breithaupt studied mathematics and science at the University of Jena. He found an interest in geology, and subsequently matriculated at the Freiberg Bergakademie,



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where he received his instruction from A.G. WERNER. He was granted an honorary doctorate by the Universities of Jena and Marburg. Subsequently, he was appointed Inspector of the Academy collections and also adjunct professor of mineralogy and geology at Freiberg, 1813–26. He became full professor in 1826, a position he retained for 40 years. He held membership in many European scientific academies. Throughout his career Breithaupt independently discovered 47 mineral species, made over 3,000 measurements of calcite, studied amorphous crystal structures, developed the law of paragenesis in minerals, and contributed to reforming mineralogical nomenclature. In recognition of his mineralogical skills, an antimonickel mineral was named “Breithaupt” in his honor by ??, 18??.

REFERENCES: ADB: 3, 292. • Barr, *Index to Biographical Fragments*, 1973: 33. • DBA: I 141, 302, 141, 225; II 174, 43–52. • DSB: 2, 440–1 [by Adolph Pabst]. • NDB: 2, 577 [by B. Sauer]. • Poggendorff: 1, cols. 289–90. • Rösler, H.J., “August Breithaupt—sein Leben und Werk,” *Freiberger Forschungshefte*, C-230 (1968), 9–19. • Sarjeant, *Geologists*, 1980: 2, 616–7 & Suppl. 2 (1995), 1, 462–3. • Schiffner, *Alter Freiberger Bergstudenten*, 1935–40: 1, 27–9, portrait, 2, 47 & 3, 107, 127. • Thomas, *Dictionary of Biography*, 1884: 431. • WBI. • *World Who's Who in Science*: 236.

Handbuch der Mineralogie ... Fortgesetzt von A. Breithaupt. Band II–IV. (Freiberg, 1815–18).

See: Hoffmann, Christian August Siegfried.

829. — German, 1815.

Uiber die | Aechtheit der Krystalle, |
von | August Breithaupt, | Kön. Sächs.
Edelsteininspektor, Lehrer der Mine- | ralogie an
der akademischen Bergschule, und | Administator
der akademischen Mineralien- | niederlage zu
Freiberg; korrespondiren- | dem Mitglie der
mineralogischen | Gesellschaft [!] zu Jena. | [ornate
rule] | Freiberg, | bei Craz und Gerlach. | 1815.

8°: A-D⁸; 32ℓ.; [1]–63, [1] p.

CONTENTS: [1–2], Title page, verso blank.; [3–6], Dedication to Johann Karl Freiesleben, dated 29 March 1815.; [7–8], “Vorrede.”; [9]–48, Text.; [49], Sectional title page, “Beilagen.”; [50], Blank.; [51]–56, “Erste Beilage.”;



UIBER DIE AECHTHEIT DER KRYSTALLE, 1815

[57]–63, “Zweite Beilage.”; [1 pg], Blank.

VERY SCARCE. The first monograph devoted exclusively to those strange mineral formations Werner had termed “Afterkrystalle,” and what are now called mineral pseudomorphs. The publication of *Ueber die Aechtheit der Krystalle* marked the beginning of Breithaupt’s most important study, and the research he is best remembered for today, paragenesis.

REFERENCES: BMC: 2, 229. • *Freidrich August Breithaupt, 1791–1873. Professor für Mineralogie an der Bergakademie Freiberg*. Freiberg, 1974. 77 p. • Roller & Goodman, *Catalogue*, 1976: 1, 163.

A.G. Werner’s letztes Mineral-System ... mit Erläuterungen versehen [By J.F.A. Breithaupt]. (Freiberg und Wien, 1817).

See: Werner, Abraham Gottlob.

830. — German, 1820 [First edition].

Kurze Charakteristik des Mineral Systems von August Breithaupt. Freiberg, 1820.

8°: xxiv, 79 p.

VERY SCARCE. Mineralogy – systematic.

REFERENCES: BMC: 2, 229. • Dana’s 7th (Bibliography): 67.

831. — German, 1820 [First edition].

Vollständige Charakteristik des Mineral-Systems. Dresden, 1820.

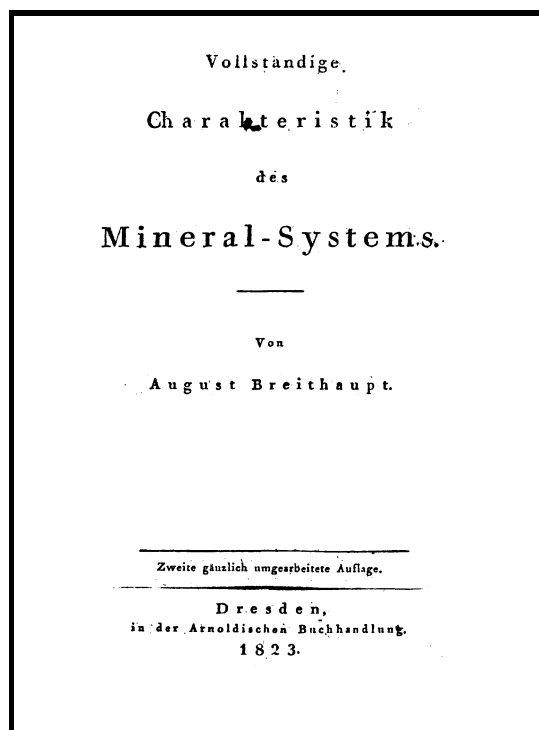
8°:

EXTREMELY RARE. This is the first appearance of Breithaupt’s text describing his new mineral classification system. In some and now missing

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reference (preface to 2nd edition?), this edition is described as having appeared only in manuscript for the use of Breithaupt's students. But this has not been confirmed. In any event it is a very rare work.

REFERENCES: BMC: [wanting]. • Dana's 7th (Bibliography): 67.



VOLLSTÄNDIGE CHARAKTERISTIK, 1823

832. 2nd edition, 1823: Vollständige | Charakteristik | des | Mineral-Systems. | [rule] | Von | August Breithaupt. | [rule] | Zweite gänzlich umgearbeitete Auflage. | [tapered rule] | Dresden, | in der Arnoldischen Buchhandlung. | 1823.

8°: [a]⁸ b-e⁸ 1-178 18¹⁰; 188ℓ.; [i]-lxxx, [2], [1]-292, [2] p. PAGE SIZE: 204 x 124 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication.; [iv], Blank.; [v]-xvi, "Vorrede | zur zweiten Ausgabe."; [xvii]-xlviii, "Kurze Einleitung | und | Grundsätze der Klassifikation."; [xlvix]-lxxx, "Uebersicht | über die | äusseren Kennzeichen."; [2 pgs], "Inhalt."; [1], Sectional title page, "Das | Mineral-Reich."; 2-172, Text (=synopsis of the mineral classification system); [173], Sectional title page, "Erläuterende | Anmerkungen | zur Charakteristik."; [174], Blank.; 175-280, Text (=description of individual species); [281]-292, "Register."; [2 pgs], "Verbesserungen."

VERY SCARCE. In this explanation of his mineral classification system, which is based principally on external characteristics, Breithaupt first provides an overview of the classification scheme followed by brief descriptions of individual mineral species.

REFERENCES: Dana's 7th (Bibliography): 67. • Roller & Goodman, *Catalogue*, 1976: 1, 163.

833. 3rd edition, 1832: Vollständige | Charakteristik | des Mineral-System's | [tapered rule] | Von | August Breithaupt, | [...17 lines of titles and memberships...] | [rule] | Dritte sehr bereicherte Auflage. | [tapered rule]

| Dresden und Leipzig, | Arnoldische Buchhandlung. | 1832.

8°: π⁸ [1]-228 234; 188ℓ.; [i]-xvi, [1]-358, [2] errata p. PAGE SIZE: 213 x 125 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Prince Friedrich August.; [iv], Blank.; [v]-xvi, "Vorrede und Einleitung."; [1], "Charaktere der Klassen und Ordnungen."; [2], Blank.; [3]-306, Text (descriptive mineralogy); [307]-325, "Anhang. Mineralien, welche künftig im Systeme Platz finden werden."; [326]-334, "Zusätze."; 335-358, "Register."; [2 pgs], "Verbesserungen."

VERY SCARCE. Mineralogy – systematic.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 113-4. • BMC: 2, 229 [wanting]. • Dana's 7th (Bibliography): 67.

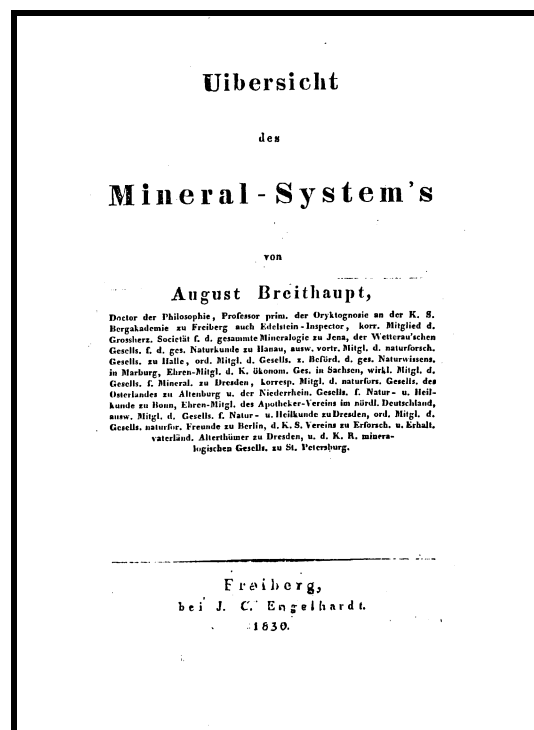
834. — German, 1829.

Vorläufige Nachricht von der Auffindung fünf sehr eigenthümlicher Abtheilungen hexagonaler und tetragonale Krystallgestalten. Freiberg, 1829.

8°: 16 p.

VERY SCARCE. Crystal forms. Also reprinted in Kastner's *Archiv gesammte Naturlehre*, (1829), 18(1) and *Bull. Soc. imp. Nats. Moscou., Ann. II*, (1830).

REFERENCES: BMC: 2, 229.



UEBERSICHT DES MINERAL-SYSTEM'S, 1830

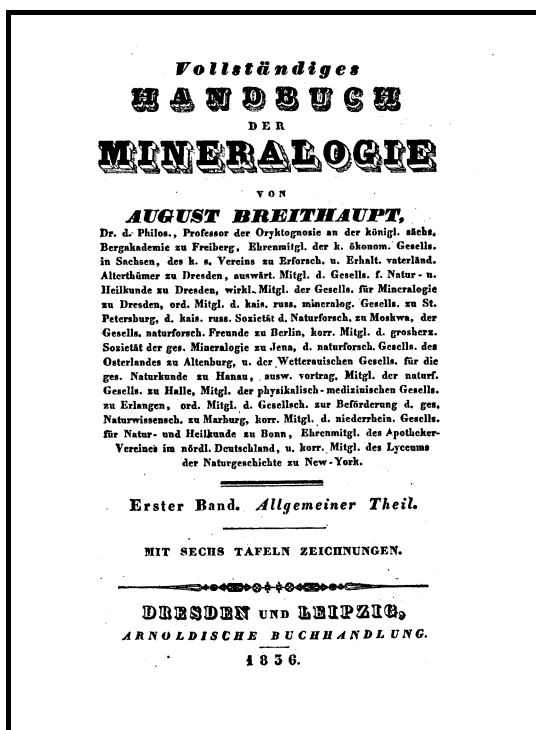
835. — German, 1830.

Uebersicht | des | Mineral-System's | von | August Breithaupt, | [...13 lines of titles and memberships...] | [tapered rule] | Freiberg, | bei J.C. Engelhardt. | 1830.

8°: xvi, 88 p.

VERY SCARCE. Mineralogy – systematic.

REFERENCES: BMC: 2, 229. • Dana's 7th (Bibliography): 67.



VOLLSTÄNDIGES HANDBUCH, 1836

836. — German, 1836-47.

Vollständiges | Handbuch | der | Mineralogie
| von | August Breithaupt, | [...17 lines of titles
and memberships...] | [double rule] | Erster Band.
Allgemeiner Theil. | [rule] | Mit Sechs Tafeln
Zeichnungen. | [ornate rule] | Dresden und Leipzig,
| Arnoldische Buchhandlung. | [rule] | 1836 [-47].

[VOL 1: 1836] 8°: [i]-viii, [1]-432 p., plates 1-6,
mostly of crystal drawings. [VOL 2: 1841] 8°: [i]-viii,
[1]-406 p., plates 7-10, of crystal drawings. [VOL 3:
1847] 8°: [2], 407-902, [4] publisher's list p., plates 11-
16, of crystal drawings. PAGE SIZE: 214 x 124 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.;
[iii]-viii, "Vorrede."—signed August Breithaupt, 14 April
1836.; [1]-28, "Einleitung."; [29], "Erste Theil. Allge-
meine Mineralogie."; [30], Blank.; [31]-396, "Erster Ab-
schnitt. Terminologie."; [397]-422, "Zweiter Abschnitt. Sys-
tematik."; [423]-429, "Dritte Abschnitt. Mineralogische
Nomenklatur."; [430], "Inhalt."; 431-432, "Verbesserun-
gen."; [At end], 6 plates.

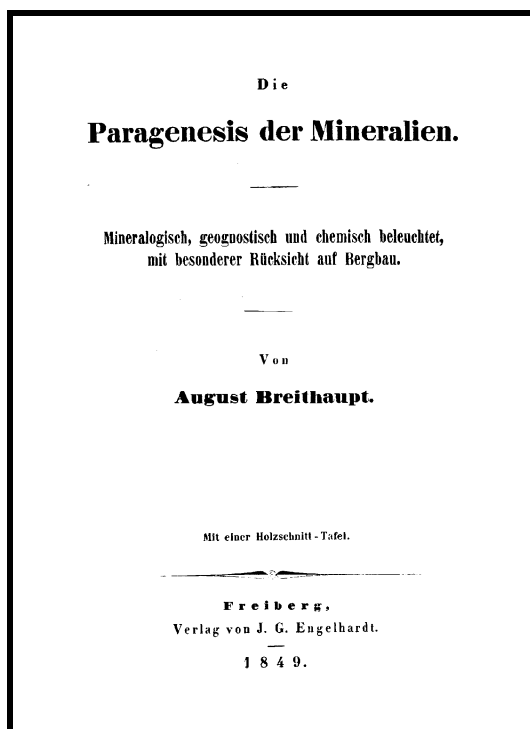
[Vol 2] [i-ii], Title page, verso blank.; [iii]-viii,
"Vorrede."—signed August Breithaupt, August 1841.;
[1], "Handbuch der Mineralogie. Zweiter Theil, oder vom
besondern Theile der Gebrauch der Charakteristik und die
Klassen der Salze und Steine."; [2], Blank.; 3-11, "Von dem
Gebrauche der Charakteristik. I. Mineralogischer Theil der

Charakteristik."; [12]-71, II. Chemischer Theil der Charak-
teristik. I. Allgemeines."; [72]-74, "III. Von dem geognostis-
chen Verhalten der Mineralien."; [75]-404, Text (descriptive
mineralogy); 405-406, "Verbesserungen und Zusätze."; [At
end], 4 plates.

[Vol 3] [2 pgs], Title page, verso blank.; [407]-
900, Text, the descriptive mineralogy continued.; 901-902,
"Verbesserungen und Zusätze."; [4 pgs], "In der Arnoldis-
chen Buchhandlung in Dresden und Leipzig..."; [At end], 6
folding plates of crystal drawings.

VERY SCARCE. Mineralogy – systematic.

REFERENCES: BMC: 2, 229. • Dana's 7th (Bibliography): 67.



DIE PARAGENESIS DER MINERALIEN, 1849

837. — German, 1849.

Die | Paragenesis der Mineralien. | [rule] | Mineral-
ogisch, geognostisch und chemisch beleuchtet, | mit
besonderer Rücksicht auf Bergbau. | [rule] | Von |
August Breithaupt. | Mit einer Holzschnitt-Tafel.
| [ornate rule] | Freiberg, | Verlag von J.G. Engel-
hardt. | [rule] | 1849.

8°: π⁵ 1-178 182; 138ℓ.; [10], [1]-276 p., one folding
woodcut plate. PAGE SIZE: 217 x 132 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg],
Dedication to King Friedrich August of Saxony.; [1 pg],
Blank.; [2 pgs], "Vorrede."—signed August Breithaupt,
March 1849.; [2 pgs], "Inhalt."; [2 pgs], "Verbesserungen."
[1]-7, "Einleitung."; [8]-276, Text.; [At end], One folding
plate, showing 14 figures.

VERY SCARCE. In *Die Paragenesis der Mineralien*,
Breithaupt published the first comprehensive study
of associations and age relationships among minerals.

BREMBATI

Although other mineralogists such as the Russian Severgin had occasionally observed some regularity in associations among different minerals, Breithaupt was the first to actively conduct research in this area as a separate study. He was well situated for this purpose with the extensive mineral collection of the Bergakademie readily available and the mining activity along the Erzgebirge in full blossom. He collected together his observations about mineral relationships in the *Paragenesis*; the importance of which was immediately recognized by others studying mineralogy, petrology and geochemistry. For instance, Gustav Bischoff frequently cites the *Paragenesis* in the first volume of his *Textbook of Chemical and Physical Geology* (4 vols., London, 1857-??), and the study of mineralogical and geological relationships is today still described by the term "parageneses." Oddly, Breithaupt apparently failed to recognize his *Paragenesis* as an important contribution. In summarizing his views and accomplishments at the end of his career for inclusion in the *Festschrift* published to commemorate the centennial of the Bergakademie (1866), Breithaupt does not even mention the paragenesis of minerals.

REFERENCES: BMC: 2, 229. • DSB: 2, 440-41 [by A. Pabst]. • *Festschrift zum hundertjährigen Jubiläum der Königl. Sächs. Bergakademie zu Freiberg am 30. Juli 1866*. Dresden, 1866. • Roller & Goodman, *Catalogue*, 1976: 1, 163.

838. — German, 1852 [First edition].

Die Charaktere der Klassen und Ordnungen des Mineral-Systems ... Freiberg, Gerlach'sen Buchdruckerei, 1852.

8°: 22 p. VERY RARE.

839. 2nd edition, 1855: Die | Charaktere | der | Klassen und Ordnungen | des | Mineral-Systems | von | August Breithaupt. | [ornate rule] | Als Manuscript ausgegeben. | Zweite Ausgabe. | [tapered rule] | Freiberg. | Bei Craz und Gerlach. | 1855.

8°: π^{12} ; 12 ℓ .; [1]-22, [2] p. In printed wraps, with the title page being the front cover. PAGE SIZE: 226 x 142 mm. uncut.

CONTENTS: [1-2], Title page, verso blank.; [3], "Vorbemerkungen."; [4], Blank.; [5]-22, Text.; [1 pg], Blank.; [1 pg], Back cover, colophon, "Druck der Gerlach's Buchdruckerei."

VERY SCARCE. This work sets out a synopsis to Breithaupt's mineralogical classification as presented in his *Handbuch der Mineralogie* (3 vols., Dresden & Leipzig, 1836-47). It provides an overview of the classes and groups of mineral species and indicates some of their physical properties such as color, luster, hardness, specific gravity, streak, etc.

REFERENCES: BMC: 2, 229.

840. — German, 1866.

Mineralogische Studien | von | August Breithaupt. | [rule] | Separat-Abdruck aus der Berg- und hüttenmännischen Zeitung | Jahrgang 1865 u. 1866. | [rule] | Leipzig. | Verlag von Arthur Felix. | 1866.

8°: 1-78 8 $\frac{5}{8}$; 61 ℓ .; [1]-122 p., illus. PAGE SIZE: 192 x 120 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-116, Text.; 117-119, "Nachträge."—signed August Breithaupt,

June 1866.; [120]-122, "Register."

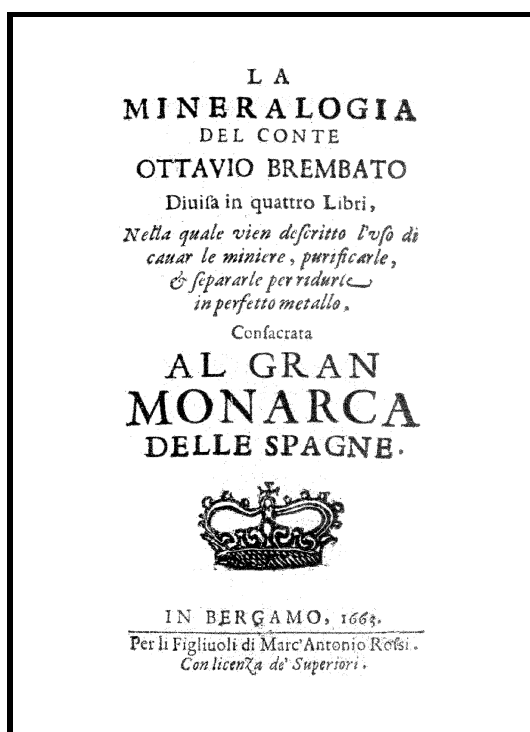
SCARCE. Separate printing from articles that appeared in the annual *Berg- und hüttenmännischen Zeitung* for 1865 & 1866. Described therein are the descriptions of various new and reexamined mineral species including frieslebenite and fauserite. The text is listed alphabetically by species name.

REFERENCES: BMC: 2, 229.

BREMBATI, Ottavio, Conte. (BORN: Bergamo, Italy, 1602; DIED: Bergamo, Italy, 1675) *Italian aristocrat, jurist & naturalist.*

Brembati was an amateur naturalist who for pleasure studied botany and mineralogy.

REFERENCES: ABI: I 201, 164-168. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • WBI.



LA MINERALOGIA, 1663

841. — Italian, 1663.

La | Mineralogia | Del Conte | Ottavio Brembato | Diuisa in quattro Libri, | Nella quale vien descritto l'uso di | cauar le miniere, purificarle, | & separarle per ridurle | in perfetto metallo. | Consacrata | Al Gran | Monarca | Delle Spagne. | [ornament] | In Bergamo, 1663. | [rule] | Per li Figliuoli di Marc' Antonio Rossi. | Con licenza de' Superiori.

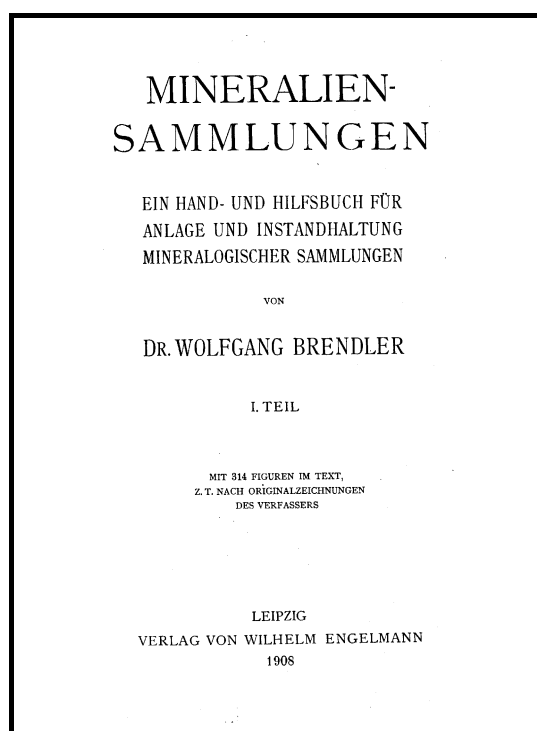
8°: A-E $\frac{8}{8}$ F $\frac{9}{9}$; 70 ℓ .; [1]-136, [4] p., frontispiece, title page vignette. Head- and tail-pieces. PAGE SIZE: 150 x 108 mm.

CONTENTS: [Frontispiece].; [1-2], Title page, verso blank.; [3]-6, Dedication to Don Filippo IV, dated 14 August 1663.; 7-8, "Illustrissimo Comiti | Octavio Brembato | ..."; 9-10, "Argomento."; 11-136, Text.; [4 pgs], "Tavola | De Capitoli."

VERY RARE. In this mineralogical work, the author divides the subject into four books, that provide in-depth discussions of locating mineralized veins in caves and mines, how to extract the mineralized ore, and reduce the ore to a perfect metal.

Facsimile reprint, 1991: *La mineralogia*. Introduzione di T.Mannoni. A cura di M.Tizzoni. Firenze, All'Insegna del Giglio 1991. XXVIII, 73 p. Contains an introduction describing Brembato's work.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 163.



MINERALIEN-SAMMLUNGEN, 1908

BRENDLER, Wolfgang. (BORN: 1873; DIED:)
German mineralogist.
No information found.

842. — German, 1908-12.

Mineralien- | Sammlungen | Ein Hand- Und Hilfsbuch Für | Anlage Und Instandhaltung | Mineralogischer Sammlungen | Von | Dr. Wolfgang Brendler | I. [-II.] Teil | Mit 314 Figuren Im Text, | Z.T. Nach Originalzeichnungen | Des Verfassers | Leipzig | Verlag Von Wilhelm Engelmann | 1908 [-1912].

2 parts. [Part 1: 1908] 8°: π^4 1-138 146 χ^6 ; 120 ℓ .; [i]-viii, [1]-220, [12] p., 314 text figures; [Part 2: 1912]

8°: π^4 1-438 446; 354 ℓ .; [i]-viii, 1-699, [1] p.; PAGE SIZE: 245 x 160 mm.

CONTENTS: [Part 1] [i-ii], Title page, verso "Alle Rechte , auch das der Übersetzung, vorbehalten."; [iii], Dedication to Paul Groth.; [iv], Blank.; [v]-vi, "Vorwort."—signed W. Brendler, September 1908.; [vii]-viii, "Inhalt."; [1]-201, Text.; [202]-220, "Register."; [1 pg], "Anhang | Inserate einschlägiger Firmen."; [1 pg], Blank.

[Part 2] [i-ii], Title page, verso "Copyright 1912 by Wilhelm Engelmann, Leipzig."; [iii]-iv, "Vorwort."—signed W. Brendler, September 1911.; [v]-viii, "Inhalt."; [1]-470, Text.; [471]-507, "Anhang."; [508]-519, "Nachträge und Berichtigungen."; [520], "Literaturübersicht."; [521]-546, "Mineral-Register."; [547]-696, "Geographisches Register."; [697]-699, "Abkürzungen und Erklärungen geographischer | Namen."; [1 pg], "Berichtigungen."

VERY SCARCE. This is a comprehensive treatment of mineralogy, directed towards collectors of minerals. Part 1 covers the morphology of crystals and the physical and chemical properties of minerals. A section at the end concerns the philosophy and purpose of collecting minerals. Part 2 is a comprehensive descriptive mineralogy with standard information augmented from the vantage point of a collector's interest. The second part concludes with a list of references and indexes to the minerals described and localities cited. The text is illustrated throughout by over three hundred illustrations prepared by the author for this work.

REFERENCES: BMC: 6, 125. • Dana's 7th (Bibliography): 67. • NUC: 74, 273 [NB 0775367].

BREYNE, Johann Philipp. (BORN: Danzig, Germany (now Gedansk, Poland), 1680; DIED: Danzig, Germany (now Gedansk, Poland), 1764)
German/Polish physician & botanist.

Breyne had a successful medical practice in his native city of Danzig. He was a Fellow of the Royal Society of London.

REFERENCES: Börner, *Vornehmsten Lebensumständen*, 1749-64. • *Catalogue of Portraits of Naturalists*: 219 [1 portrait listed]. • Cleevley, *World Palaeontological Collections*, 1983: 65. • DBA: I 145, 136-139; II 178, 66-69. • Ferchl. • Grau, C., "The scientific correspondence of the Gdansk physician and botanist Johann Philipp Breyne," in: *Actes du Xie Congrès International d'Histoire des Sciences* 1965, 2 (1968), 158-161. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Joost, W., "Die Vogelbilder des Danziger Naturforschers Johann Philipp Breyne (1680-1764)," *Journal für Ornithologie*, 108 (1967), no. 3. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 297. • Roob, H., *Jacob und Johann Philipp Breyne, zwei Danziger Botaniker im 17. und 18. Jahrhundert*. Gotha, Forschungsbibliothek, 1988. 138 p., illus. [Published as: *Veröffentlichungen der Forschungsbibliothek Gotha*, Heft 27; ISBN 3-910027-00-8]. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 162.

843. — Latin, 1722.

Epistola de Melonibus Petrefactis Montis Carmel Vulgo Creditis ad D. Johannem Anderson. Cui annexe binæ Epistolæ ad Authorem datæ, altera De Aquis Matricalibus Olonicensibus, nos ex Africa in Belgium deferri coepit. Lipsiae, Literis I. Titii, 1722.

4°: 48 p., 2 plates. RARE.

BREZINA

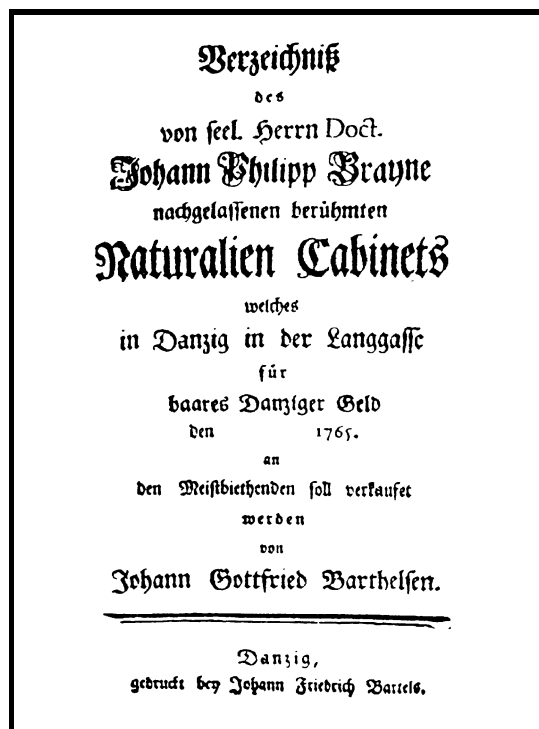
REFERENCES: BMC: 2, 234. • LKG: XVI 275. • Ward & Carozzi, *Geology Emerging*, 1984: no. 315.

844. Dissertation, 1732: *Dissertatio Physica de Polythalamiiis, Nova Testaceorum Plasse, itemque Commentatinocula de Bedemnitiss Prussicis et Schediasma de Erhinis Methodice Disponendis*. Gedaki, 1732.

4°: 64 p., 12 plates.

RARE. This work describes and classifies the fossils and minerals found in Prussia, especially those around Danzig.

REFERENCES: BMC: 1, 234. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 148. • LKG: XVII 144.



VERZEICHNISS, 1765

845. — German, 1765 [Sale catalog].

Verzeichniß | des | von seel. Herrn Doct. | Johann Philipp Brayne | nachgelassenen berühmten | Naturalien Cabinets | welches | in Danzig in der Langgasse | für | baares Danziger Geld | de 1765. | an | den Meistbiethenden soll verkauft | werden | von | Johann Gottfried Barthelsen. | [double rule] | Danzig, | gedruckt bey Johann Friedrich Bartels. 8°: [1]-54 p.

RARE. Auction sale catalog itemizing the extensive natural history collections of Johann Philipp Breyne. It was compiled by Johann Gottfried Barthelsen, and lists all manner of native specimens, including minerals and fossils found around Breyne's native city of Danzig.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 264. • Wilson, *History of Mineral Collecting*, 1994: 207.



BREZINA

BREZINA, Maria Aristides. (BORN: Vienna, Austria, 4 May 1848; DIED: Vienna, Austria, 25 May 1909) *Austrian mineralogist.*

Educated in mineralogy at Tübingen, Brezina was the custodian of the royal mineral cabinet in Vienna, before being named the director of the mineral collection of the famous Hofmuseums in that city.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 33. • DBA: I 145, 165-169; II 178, 87-94. • Poggendorff: 3, 192-3, 4, 182-3 & 5, 165. • Sarjeant, *Geologists*, 1980: 2, 619. • WBI.

846. — German, 1884.

Methodik | Der | Krystall-Bestimmung. | [ornate rule] | Von | Dr. Aristides Brezina | Custos am k.k. mineralogischen Hof-Cabinete, Privatdocent an der Universität Wien. | [ornate rule] | Mit einer lithogr. Tafel und 93 in den Text gedruckten Holzschnitten. | [ornate rule] | Wien. | Druck und Verlag von Carl Gerold's Sohn. | 1884.

8°: 342 p., one lithographic plate (folding), 93 woodcuts.

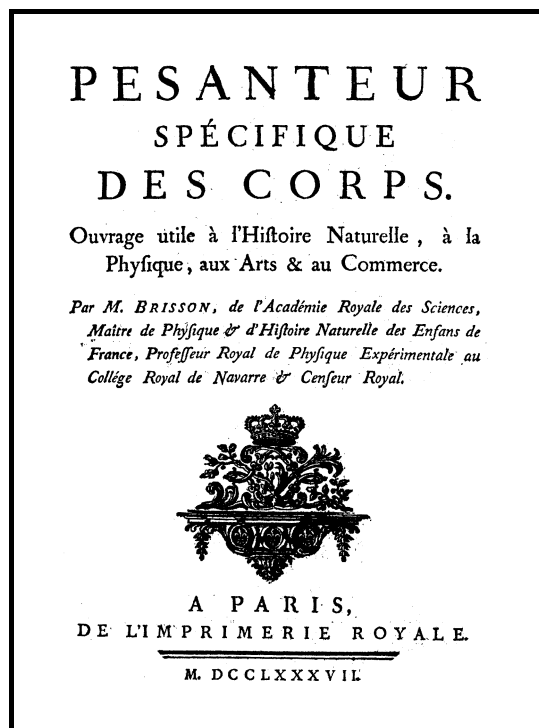
VERY SCARCE. In this work, a prize winning essay, Brezina investigates crystals, concentrating on the various methods used to measure their forms. He attempts to determine the best method that requires the shortest time to make the measurements of the crystal form and create its stereographical projection. Methods of optical determination are also discussed including orientation, optical axes, parallel plates, etc. Brezina also includes information on various theories together with his own critique of them regarding the material he covers.

REFERENCES: *Annalen der Physik-Beiblätter*: 8 (1894), p. 538-41 [review]. • NUC.

BRISSON, Mathurin Jacques. (BORN: Fontenay-le-Comte, France, 30 April 1723; DIED: Broissy near Versailles, France, 23 June 1806) *French chemist & physicist.*

Brisson was professor of physics in the Collège de Navarre, the École Centrale, and the Lycée Bonaparte in Paris. He authored textbooks in zoology, ornithology, physics and other sciences.

REFERENCES: ABF: I 156, 223-232. • Beauchamp, *Biographie Moderne*, 1816. • DBF: 7, 366-7 [by R. D'Amat]. • *Encyclopaedia Britannica*, 11th edition. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • Partington, *History of Chemistry*, 1961-70: 3, 99. • Poggendorff: 1, cols. 301-2. • WBI.



PESANTEUR SPÉCIFIQUE DES CORPS, 1787

847. — French, 1787.

Pesanteur Spécifique Des Corps. Ouvrage utile à l'Histoire Naturelle, à la Physique, aux Arts & au Commerce. Par M. Brisson, de l'Académie Royale des Sciences, [...3 lines of titles and memberships...] [ornament] A Paris, De L'Imprimerie Royale. [double rule] M. DCCLXXXVII.

4°: π^1 a-c⁴ A-Nnn⁴ Ooo²; 251 ℓ .; [2], j-xxiv, [1]-453, [1], j-xx, [2] p., 2 plates, engraved title. PAGE SIZE: 260 x 184 mm.

CONTENTS: [2 pgs], Title page, verso blank.; j-xix, "Discours Préliminaire."; xx-xxij, "Tableau Méthodique Du Règne Minéral."; xxij-xxiv, "Table Méthodique Des Fluides."; [1]-453, Text.; [1], Blank.; j-xx, "Table Des Matières."; [2 pgs], "Additions Et Corrections."

VERY SCARCE. Brisson, an experimental physicist of great skill, prepared this work, considered "The first major tables of specific gravity." Inaccuracies in previous compilations of specific gravities, including

the widely used and extensive tables of P. Van Musschenbroek [1692-1761], led Brisson to determine the specific gravity values of a large number of metal, mineral, fluid, animal, and vegetable substances, using clean water at a standard temperature. As Sinkankas notes, Brisson was accurate enough to be able to distinguish between authentic and fake precious stones through the means of specific gravity. Brisson urged that this method of identification together with other commonly used features like color and hardness could be a reliable diagnostic tool. Through his role as a teacher and his writings, Brisson had considerable influence in spreading scientific knowledge.

REFERENCES: BL: [716.g.3.]. • Cole, *Chemical Literature*, 1988: no. 204. • DSB: 2, 473-5. • LKG: X 5. • Partington, *History of Chemistry*, 1961-70: 3, 99. • Roller & Goodman, *Catalogue*, 1976: 1, 167. • Sinkankas, *Gemology Bibliography*, 1993: no. 932.

848. German transl., 1795: Die | spezisischen Gewichte | der | Körper. | Aus dem Französischen | des Herrn Brisson, | [...3 lines of titles and memberships...] | übersetzt, | und mit Anmerkungen, besonders die Litteratur | betreffend, vermehrt | von | Johann Georg Ludolph Blumhof, | der Mathematik und ökonom. Wissensch. Befl. | [tapered rule] | Mit Zusätzen vom Herrn Hofrath | Kästner. | [rule] | Mit zwei Kupfertafeln. | [rule] | Leipzig, | in der Schäferischen Buchhandlung. | 1795.

8°: *8 **8 A-Aa⁸ Bb⁴; 212 ℓ .; [i]-xxxii, [1]-392 p., 2 folding plates (crystal drawings). PAGE SIZE: 198 x 110 mm.

CONTENTS: [i-ii], Title page, verso 4 lines of quotation signed Lucret.; [iii]-[viii], Dedication.; [ix]-x, "Vorbericht des Uebersetzers."—signed J.G.L. Blumhof, April 1795.; [xi]-xxix, "Vorrede des Verfassers."; xxx-xxxii, "Systematische Tafel des Mineralreiches."; [1]-380, Text.; 381-392, "Abrah. Gotthelf Kästner's | Nachricht | von Ghetaldi Buche: | Promotus Archimedes."

VERY SCARCE. Translation by JOHANN GEORG LUDOLPH BLUMHOF of *Pesanteur Spécifique des Corps* (Paris, 1787).

REFERENCES: BL.

849. English transl., 1800: Elements | Of | The Natural History | And Chymical Analysis | Of | Mineral Substances, | For The | Use of the Central Schools. | [ornate rule] | Translated From The French | Of | Mathurin James Brisson, | [...3 lines of titles and memberships...] | [ornate rule] | London: | Printed By M. Ritchie, Middle Street, Cloth Faik; | For I. Walker, 44, Paternoster Row; And Vrenor And Hood, | In The Poultry. | [rule] | 1800.

8°: π^4 B-K⁸ L³; 79 ℓ .; [i]-viii, [1]-149, [1] p.

CONTENTS: [i-ii], Title page, verso blank.; iii-viii, "Preface."; [1]-149, Text.; [1 pg], Blank.

RARE. Partial translation of of Brisson's *Pesanteur Spécifique des Corps* (Paris, 1787) describing the chemical analysis of simple mineral substances. This appears to be the first independent work in English describing chemical analysis of minerals and may have been used in the schools of England as a textbook prior to the introduction of Accum's works. It appears to represent a translation of only the first sections of Brisson's work.

REFERENCES: BL: [Cup.502.1.14.]. • LKG: XII 218b.

850. — French, 1797.

Principes élémentaires de l'Histoire naturelle et chymique des substances minérales; ouvrage utile aux écoles centrales. Paris, F. Didot, 1797.

8°: 245 p. VERY SCARCE.

REFERENCES: LKG: XII 216. • Ward & Carozzi, *Geology Emerging*, 1984: no. 316.

BRITISH MUSEUM

851. German transl., 1798: Anfangsgrunde der Naturgeschichte und Chemie der Mineralien zum Gebrauche der Zentralschulen von M.J. Brisson. Aus dem Französisch übersetzt von F.C. Drechsler und mit Anmerkungen versehen von J.B. Trommsdorff. Mainz, 1798.

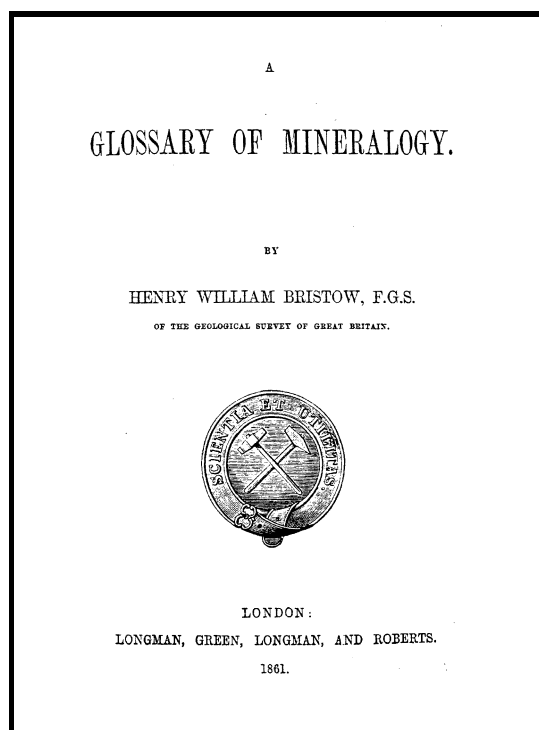
8°.
RARE. Translation by F.C. Drechsler of *Principes Élémentaires de l'Histoire Naturelle* (Paris, 1797).

REFERENCES: LKG: XII 217a.

BRISTOW, Henry William. (BORN: 1817; DIED: 1889) *English geologist.*

Bristow was educated at King's College, London, and upon graduation in 1842 he entered into the service of the Geological Survey of Great Britain. He retired in 1888.

REFERENCES: BBA: I 148, 133-138. • Boase, *Modern English Biography*, 1892-1921. • DNB. • *Geological Magazine*: 6 (1889), 381-4. • Lambrecht & Quenstedt, *Catalogus*, 1938: 58. • Poggendorff: 3, 196-7 & 4, 187. • Sarjeant, *Geologists*, 1980: 2, 621. • WBI.



GLOSSARY OF MINERALOGY, 1861

852. — English, 1861.

A | Glossary of Mineralogy. | By | Henry William Bristow, F.G.S. | of the Geological Survey of Great Britain. | [ornament] | London: | Longman, Green, Longman, and Roberts. | 1861.

8°: A⁸ a-b⁸ B-Z⁸ Aa-Dd⁸ Ee² 2A-2C⁴ 2D² χ²; 235ℓ.; [i]-xlvi, [1], [1]-420, [2] p. Printer's device on page 420. PAGE SIZE: 192 x 125 mm.

CONTENTS: [i-ii], Half title page, "Glossary of Mineralogy," verso "London Printed by Spottiswoode and Co.," [iii-iv], Title page, verso blank.; [v]-vi, "Preface"—signed Henry W. Bristow, 1st September 1861.; vii, "The

following is a list of the principal books which have been referred to in compiling this work." [27 entries]; [viii], blank.; [ix], "Table of Contents."; [x], Blank.; [xi]-xxviii, "Introduction."; xxix-xliii, "Classification of Minerals."; xlv-xlv, "List of Symbols and Signs made use of in the following work."; xlv, "Technical Terms used by Jewellers and Lapidaries."; xlvii, "Errata and Addenda."; [1 page], Blank.; [1]-420, "A Glossary of Mineralogy."; [1 pg], Title page advertisement for J. Beete Juke's 'The Student's Manual of Geology.'; [1 pg], Blank.

SCARCE. In the preface, Bristow writes of his wish to create a work that could be used by those wishing to study the mineral collections of the British Museum and the Museum of Practical Geology. A short technical introduction briefly defines crystallography, physical and chemical properties, mineral classification, and the floor plan of the Museum of Practical Geology of London. The main text is an alphabetical dictionary of hundreds of terms. Many of the definitions are more detailed than a simple explanation by providing historical and locality information.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 168. • Sinkankas, *Gemology Bibliography*, 1993: no. 934.

BRITISH MUSEUM (Natural History). Library.

853. — English, 1903-40.

Catalogue | of the | Books, Manuscripts, | Maps and Drawings | in the | British Museum | (Natural History) | Vol. I. A—D. | [ornament] | London: | Printed By Order Of The Trustees. | Sold By | Longmans & Co., 39 Paternoster Row, E.C.; | B. Quaritch, 15 Piccadilly, W.; Dulau & Co., 37 Soho Square, W.; | Kegan Paul, Trench, Trübner & Co., Charing Cross Road, W.C.; | And At The | British Museum (Natural History), Cromwell, Road, S.W. | 1903. | [All rights reserved.]

8 vols. [VOL 1: 1903] 4°: [i]-viii, [1]-500 p. (A-D). [VOL 2: 1904] 4°: [6], [501]-1038 p. (E-K). [VOL 3: 1910] 4°: [6], [1039]-1494 p. (L-O). [VOL 4: 1913] 4°: [6], [1495]-1956 p. (P-Sn). [VOL 5: 1915] 4°: [6], [1957]-2403 p. (So-Z). [VOL 6: 1922] 4°: [6], [1]-511, [1], [2], [1]-48 p. (Supplement, A-I). [VOL 7: 1933] 4°: [6], [513]-967, [1] p. (Supplement, J-O). [VOL 8: 1940] 4°: [6], [969]-1480 p. (Supplement, P-Z).

CONTENTS: [Vol 1] [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v], "Preface."; [vi], Blank.; [vii]-viii, "Introduction."; [1]-500, Text.

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [501]-1038, Text.

[Vol 3] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [1039]-1494, Text.

[Vol 4] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [1495]-1956, Text.

[Vol 5] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [1957]-2403, Text.

[Vol 6] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [1]-511, Text.; [1 pg], Blank.; [1 pg], Sectional title page, "Addenda And Corrigenda | Vols. I. And II. | A—Hooker

[rule] | Catalogue | Of The | Library | Of The | British Museum | (Natural History)."; [1 pg], Blank.; [1]-48, Text of the Addenda and Corrigenda.

[Vol 7] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], Blank.; [513]-967, Text.; [1 pg], Blank.

[Vol 8] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Preface."; [1 pg], "Corrigenda."; [969]-1480, Text.

VERY SCARCE. This is an author catalog, covering the general library and the libraries attached to the Departments of Zoology, Geology, Mineralogy and Botany. It is particularly valuable for the detailed bibliographical notes and tables of contents of composite works, series, reports of scientific expeditions, etc. The original catalog consists of the first five volumes that were in later years supplemented by three additional volumes. From its publication it has been an important reference, listing titles of many rare books in natural history, including mineralogy.

Facsimile reprint, 1992: New York, Maurizio Martino, 1992. 8 vols. bound in four.

REFERENCES: BL. • Bridson, *History of Natural History*, 1994: Bc219. • NUC.

BROCCHI, Giovanni Battista. (BORN: Bassano, Italy, 18 February 1772; DIED: Kartoum, Sudan, 23 September 1826) *Italian geologist & mineralogist.*

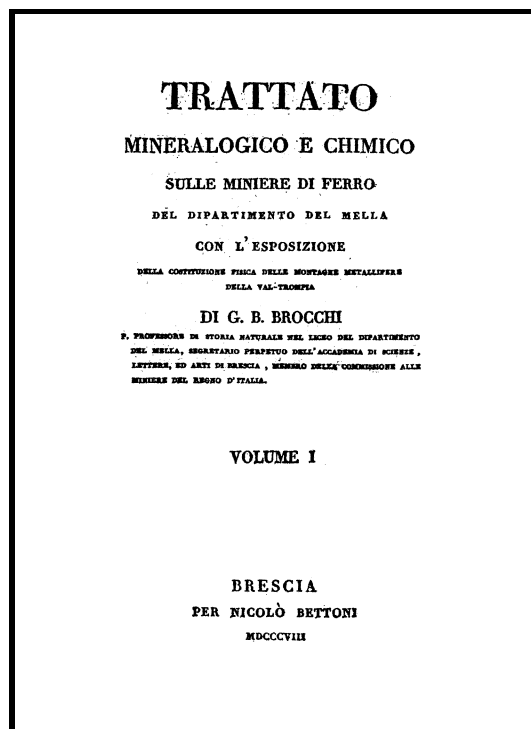
In 1801, Brocchi was named professor of natural history at the Lyceum in Brescia. In 1809, he became inspector of mines in Milan, and for this made an extensive tour of Italy. At the request of the royal family, he made in 1821 an tour of Egypt. Brocchi was a member of the Institute of Milan.

It studied jurisprudence and theology to the University of Padova, but very soon it began to be interested to natural sciences and in particular to geology. He was university professor of natural history to the Grammar school of Brescia from 1801 to 1808, year in which was called in the napoleonic administration of the Reign of Italy like Inspector of the mines and it was moved to Milan. Brocchi maintained this assignment until the dissolution of the Council of the Mines in 1814 and published three deals to you mineralogici on some goes them Lombardic and tirolesi south. Between 1811 and 1819 compi you attend geo-mineralogici travels in several regions of Italy being interested in particular to vulcanici lands of Lazio and Campania. It died during a travel in Africa.

REFERENCES: ABI: I 205, 67; 205, 121; II 85, 355-356. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • Berti, G.D., *Un naturalista dall'Ancien Régime alla Restaurazione: Giambattista Brocchi (1772-1826)* / Giampietro Berti. Bassano, G.B. Verci, [1988]. 156 p., ill. [Published as: *Quaderni bassanesi. Storia*, no. 1.]. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • Cleavelly, *World Palaeontological Collections*, 1983: 66. • DSB: 2, 480-2 [by J.T. Gregory]. • *Encyclopaedia Britannica*, 11th edition. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • ISIS, 1913-65: 1, 193. • Lambrecht & Quenstedt, *Catalogus*, 1938: 59. • Poggendorff: 1, col. 303. • Sarjeant, *Geologists*, 1980: 2, 621-2, Suppl. 1 (1986), 1, 314 & Suppl. 2 (1995), 1, 465. • WBI. • *World Who's Who in Science*: 245.

854. — Italian, 1808.

Trattato | Mineralogico E Chimico | Sulle Miniere Di Ferro | Del Dipartimento Del Mella | Con L'Esposizione | Della Costituzione Fisica Delle Montagne Metallifere | Della Val-Trompia | Di G.B. Brocchi | [...4 lines of titles and memberships...]



TRATTATO MINERALOGICO E CHIMICO, 1808

| Volume I [-II] | Brescia | Per Nicolò Bettoni | MDCCCVIII.

2 vols. [VOL 1] 8°: π^3 [*]⁸ 2*-4*8 1-188 194; ??l.; [6], I-LXII, [2], 1-296 p., one folding table (p. 74, "Quadro | Delle Dimensioni dei Forni della Val-Trompia, e della Val Sabbia."). [VOL 2] 8°: [1]-228; 176l.; [1]-352 p. PAGE SIZE: 214 x 130 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso "Itum est in viscera terræ, I ovid."; [4 pgs], "Indice | Dei Capitoli." [=contents]; I-LXII, "Discourse Preliminaire."; [2 pgs], Blanks.; 1-296, Text.

[Vol 2] [1-2], Title page, verso blank.; 3-352, Text.

VERY SCARCE. An extensive work on the iron works of Mella in Val Trompia near Brescia. It contains an historical section, an exposition of the methods of excavation, the fusion of the minerals and their treatment, followed by the descriptions of the different varieties of iron and their chemical analyses. The last section deals with the geology of the region. The author was a pupil of Werner.

REFERENCES: LKG: XIV 656. • Roller & Goodman, *Catalogue*, 1976: 1, 169. • Ward & Carozzi, *Geology Emerging*, 1984: no. 317. • Zittel, *History of Geology*, 1901: pp. 95-6.

855. — Italian, 1811.

Memoria Mineralogica sulla valle di Fassa in Tirol di G. Brocchi. Milano, G. Silvestri, 1811.

8°: 233 p. VERY SCARCE.

REFERENCES: LKG: XIV 265. • Ward & Carozzi, *Geology Emerging*, 1984: no. 318.

856. — Italian, 1814.

Conchiologia Fossile | Subapennina | Con | Osservazioni Geologiche | Sugli Apennini E Sul Suolo Adiacente | Di G. Brocchi | [...2 lines of titles and memberships...] | [rule] | Con Indice Tavole In Rame. | [rule] | Tomo Primo. | Milano | Dalla Stamperia Reale | 1814.

2 vols. [VOL 1] 4^o: 56, lxxx, 240 p. [VOL 2] 4^o: [4], 241-712 p., 16 plates.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Conchiologia Fossile | Subapennina," verso blank.; [2 pgs], Title page, verso two lines of quotation.; [1]-56, "Osservazioni Geologiche."; [i]-lxxx, "Discorso | sui Progressi Dello Studio | Della | Conchiologia Fossile | In Italia."; [1]-240, Text.

[Vol 2]

VERY SCARCE. A beautifully illustrated monograph being one of the fundamental works on the Tertiary paleontology and stratigraphy of Italy. After a long introduction the work continues with a summary of the progress of paleontological science in Italy from 1300 to 1810. This is followed by an account of the formation of the Apennines Mountains and the adjacent plains, in which the Mesozoic and Tertiary sediments are clearly distinguished and described. The second volume provides descriptions of shells from the Tertiary Epoch of the whole country, which is illustrated by sixteen masterfully engraved plates. Of special interest are Brocchi's ideas on the extinction and the duration of existence of genera and species; he rejects the supposition of great catastrophes, and inclines to the theory of a steady and regular development.

REFERENCES: LKG: XVII 153*. • Ward & Carozzi, *Geology Emerging*, 1984: no. 319.

857. Second Edition, 1843: Conchiologia Fossile | Subapennina | Con | Osservazioni Geologiche | Sugli Apennini | E Sul Suolo Adiacente | Di | Gio. Batista Brocchi | [...5 lines of titles and memberships...] | [wavy rule] | Con Atlante Di Sedici Tavole | [wavy rule] | Volume Primo | Milano | Per Giovanni Silvestri | 1843.

2 vols. [VOL 1] 8^o: [i]-xxiv, [1]-432 p. [VOL 2] 8^o: [4], [1]-556 p., 16 plates.

CONTENTS: [Vol 1] [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso two lines of quotation.; v-vi, "Avviso."; [ix]-xxiv, "Notizie | Su La Vita E Su Le Opere | Dell'Autore."; [1]-425, Text.; [426]-430, "Indice."; [431]-432, "Indice | Delle Materie Contenute | Nel Volume Primo."

[Vol 2] [2 pgs], Sectional title page, verso blank.; [2 pgs], Title page, verso two lines of quotation.; [1]-534, Text.; [535]-554, "Indice Delle Materie."; [555]-556, "Indice | Delle Materie Contenute | Nel Volume Secondo."; [At end], 16 plates.

RARE. A reprinting of Brocchi's *Conchiologia Fossile Subapennina* (1814), incorporating a biography of the author, who had died more than two decades before.

REFERENCES: BL. • NUC.

858. — Italian, 1817.

Catalogo ragionato di una Raccolta di Rocce, disposto con ordine geografico. Per servire a Geognosia dell'Italia. Milano, I.R. Stamperia, 1817.

8^o: xl, 346, [1] p. VERY SCARCE.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 169.



BROCHANT

BROCHANT DE VILLIERS, André Jean Marie.

(BORN: Villiers, near Mantes, France, 6 August 1772; DIED: Paris, France, 16 May 1840) *French geologist & mineralogist.*

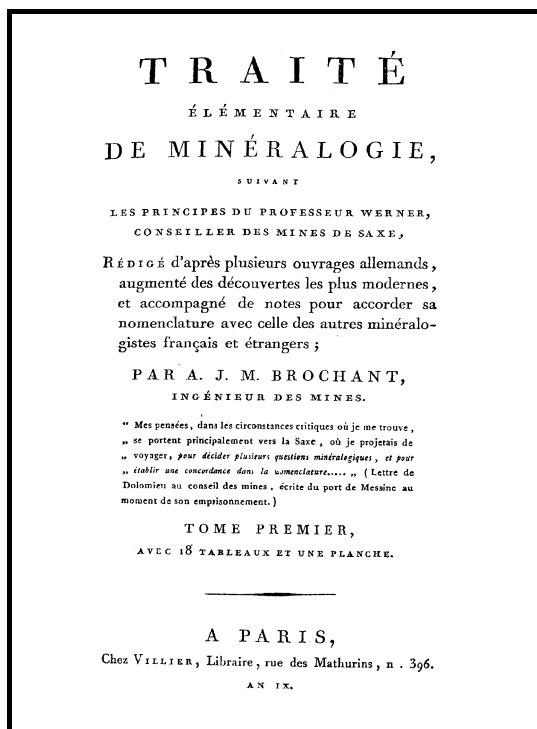
From 1791 to '93, Brochant studied under A.G. WERNER at Freiberg. In 1794 he entered the newly formed École des Mines. He won an appointment as an engineer in the Agence des Mines in 1800 and became an editor of the *Journal des Mines* in 1801. In 1804, Brochant was named a professor of geology of mineralogy at the École des Mines. Eventually he became inspector general of mines throughout France. Brochant was instrumental in establishing a national survey to produce a geological map of the country. He held membership in the Académie des Sciences. In his honor, the mineral species "Brochantite" was named in his honor by A. LÉVY in 1824.

REFERENCES: ABF: I 157, 85-89. • Drugulin, *Sechstausend Portraits*, 1863: no. 654. • DSB: 2, 482 [by J.G. Burke]. • *Encyclopaedia Britannica*, 11th edition. • Lambrecht & Quenstedt, *Catalogus*, 1938: 59. • Poggendorff: 1, col. 304. • Sarjeant, *Geologists*, 1980: 2, 622. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 2, 21-2. • Thomas, *Dictionary of Biography*, 1884: 437. • WBI. • *World Who's Who in Science*: 245.

859. — French, 1801-3 [First edition].

Traité | Élémentaire | De Minéralogie, | Suivant | Les Principes Du Professeur Werner, | Conseiller Des Mines De Saxe, | Rédigé d'après plusieurs ouvrages allemands, | augmenté des découvertes les plus modernes, | et accompagné de notes pour accorder sa | nomenclature avec celle des autres minéralo- | gistes français et étrangers; | Par A.J.M. Brochant, | Ingénieur Des Mines. | [...6 lines of quotation from Dolomieu...] | Tome Premier. [-Second.] | Avec 18 tableaux et une planche. | [tapered rule] | A Paris, | Chez Villier, Libraire, rue des Mathurins, n^o. 396. | An IX [-XI].

2 vols. [VOL 1: 1801] 8^o: π^2 A-Rr⁸ Ss²; 324 ℓ .; [4], [1]-644 p., 1 folding plate.; [VOL 2: 1803] 8^o: a⁴ A-Tt⁸ Vv²; 342 ℓ .; [i]-vii, [1], [1]-674 p. One folding engraved



TRAITÉ ÉLÉMENTAIRE DE MINÉRALOGIE, 1801

plate signed 'Cloquet, Sculp.' (facing vol. I, p. 644).
PAGE SIZE: 216 x 130 mm. uncut.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Traité | Élémentaire | De | Minéralogie. | Tome I," verso "Avis Au Relieur.;" [2 pgs], Title page, verso blank.; [1]-18, "Préface.;" [19]-22, "Notice des ouvrages de Minéralogie dans lesquels on | a puisé les principes de Werner, ...;" [23]-24, "Notice des autres ouvrages principaux de Minéralogie | qui sont cités dans ce Traité.;" [25]-76, "Introduction.;" [77]-131, "Exposition | Des | Caractères Extérieurs | Des Minéraux Simples.;" [1 pg], Blank.; [133]-152, "Tableau | De La Classification Des Minéraux | Du Professeur Werner.;" [153]-644, Text; [At end], 1 folding plate.

[Vol 2] [i-ii], Half title page, "Traité | Élémentaire | De Minéralogie. | Tome II.," verso "Avis Au Relieur.;" [iii-iv], Title page, verso blank.; [v]-vii, "Avertissement.;" [1 pg], Blank.; [1]-488, Text.; [489]-557, "Appendice.;" [558], Blank.; [559]-640, "Traité Des Roches.;" [641]-658, "Table | Des Noms Français.;" [659]-670, "Table | De Noms Allemands.;" [671]-674, "Corrections Et Additions."

VERY SCARCE. A major exposition of Werner's theories in the French language. Brochant writes that he originally conceived to write a work that provided a concise view of the mineralogical principles of Werner accompanied by a list of synonyms. But after starting the work, he decided that it was inadequate treatment and therefore compiled a complete treatise, enriched by his own observations. He prepared this work by examining every systematic work of importance written in the German language. Brochant has assimilated the information into a superb treatise. He has closely followed the arrangement of Werner as delivered in lectures in 1800. His descriptions are compiled from

the collected authorities of all authors consulted. A list of synonyms is presented. In the second volume, the author makes announcements of recent discoveries and how they were made. He also includes species and other information not contained in Werner's original system. Brochant has added a sketch of geological arrangement, illustrated by descriptions of rocks, principally derived from field notes compiled by DAUBUISSON. Brochant has endeavored to select from the knowledge others have accumulated, rather present his own theories. When he ventures a remark it is for illustration only. Thus, he has made this work a vehicle for presenting Werner's theories to the mineralogists of France for them to determine the merits of the system he has expounded.

The directions to binder in vol. I instruct that the tables are to be bound in vol. II, but the directions in vol. II state that the additions to the volume have been so great that they must be bound separately. They are in fact sometimes bound into vol. II, but they are missing in this copy as in the University of Illinois copy described by Ward and Carozzi. Offered with a second copy of vol. II, untrimmed (130 x 225mm) in the original blue boards, rebaked, new endpapers, signature 'Ilchester' on half-title, also without the tables.

REFERENCES: Dana's 7th (Bibliography): 67. • *Edinburgh Review*: 3 (1808), 493-7. • LKG: XII 154. • Roller & Goodman, *Catalogue*, 1976: 1, 169. • Ward & Carozzi, *Geology Emerging*, 1984: no. 322.

860. 2nd edition, 1808: Traité | Élémentaire | De Minéralogie, | Suivant | Les Principes Du Professeur Werner, | Conseiller Des Mines De Saxe; | Rédigé d'après plusieurs Ouvrages allemands, | augmenté des Découvertes les plus modernes, | et accompagné de Notes pour accorder sa | Nomenclature avec celle des autres Minéra- | logistes français et étrangers; | Par A.J.M. Brochant, | Professeur de Minéralogie à l'Ecole pratique des | Mines. | ...6 lines of quotation from Dolomieu... | Tome Premier. [-Second.] | Avec 18 Tableaux et une Planche. | [rule] | Seconde Édition. | [rule] | A Paris, | Chez Madame Veuve Villier, Libraire, rue des Mathurins, | n° 15. | [rule] | 1808.

2 vols. [VOL 1] 8°: [4], [1]-644 p., 1 folding plate (24 figures of xl drawings).; [VOL 2] 8°: [4], [1]-674 p. PAGE SIZE: 194 x 122 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Traité | Élémentaire | De | Minéralogie. | Tome I.," verso "Avis Au Relieur.;" [2 pgs], Title page, verso blank.; [1]-18, "Préface.;" [19]-22, "Notice des ouvrages de Minéralogie dans lesquels on | a puisé les principes de Werner, ...;" [23]-24, "Notice des autres ouvrages principaux de Minéralogie | qui sont cités dans ce Traité.;" [25]-76, "Introduction.;" [77]-131, "Exposition | Des | Caractères Extérieurs | Des Minéraux Simples.;" [1 pg], Blank.; [133]-152, "Tableau | De La Classification Des Minéraux | Du Professeur Werner.;" [153]-644, Text; [At end], 1 folding plate.

[Vol 2] [2 pgs], Half title page, "Traité | Élémentaire | De Minéralogie. | Tome II.," verso "Avis Au Relieur.;" [2 pgs], Title page, verso blank.; [1]-488, Text.; [489]-557, "Appendice.;" [558], Blank.; [559]-640, "Traité Des Roches.;" [641]-658, "Table | Des Noms Français.;" [659]-670, "Table | De Noms Allemands.;" [671]-674, "Corrections Et Additions."

VERY SCARCE. Essentially a reprint of the first edition published in 1801 and 1803, with only minor alterations.

REFERENCES: Dana's 7th (Bibliography): 67. • LKG: XII 154. • Ward & Carozzi, *Geology Emerging*, 1984: no. 323.

861. Italian transl., 1807: Elementi | Di Mineralogia | Del | Signor Brochant | Compendiosamente Tradotti | Ed Aumentati Di Nuove Scoperte | E Di Un Ragionamento | Sulle Classificazioni | Ad Uso De'Licei | Del Regno

BROCHANT DE VILLIERS

D'Italia. | [rule] | Tomo I. [-II.] | [rule] | Milano | Per
Cairo E Compagno | 1807.

2 vols. [VOL 1] 16°: 291 p. [VOL 2] 16°: 313 p., one
table. PAGE SIZE: 200 x 125 mm.

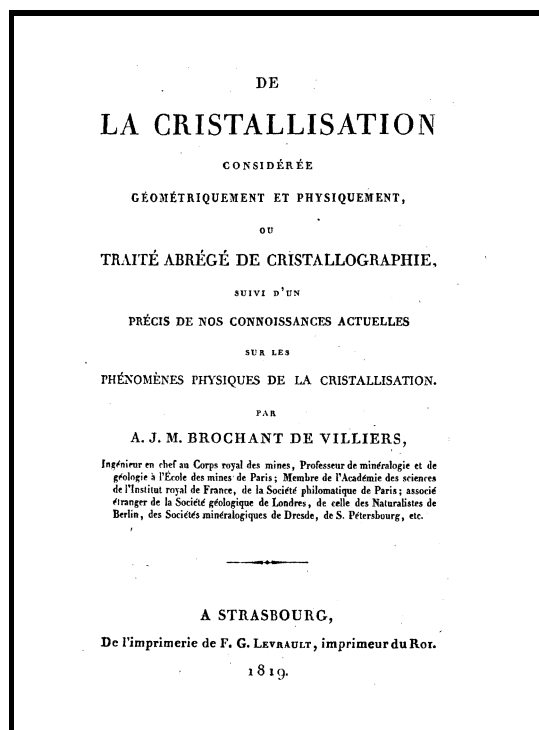
VERY SCARCE. Re Brochant, I have the edition
you mention, which is the first. A beautifully bound
presentation copy in two volumes, 291 p., 1 folded table
and 1 folded plate + 313 p. - 20x12.5 cm (see Attachment).

REFERENCES: Personal communication: [Renato and
Adriana Pagano]. • Roller & Goodman, *Catalogue*, 1976:
1, 169.

862. Italian transl., 3rd edition, 1825: Elementi | Di
Mineralogia | Del | Signor Brochant | Compendiosamente
Tradotti | Ed Aumentati Di Nuove Scoperte | E Di Un
Ragionamento | Sulle Classificazioni. | Terza Edizione |
[short rule] | Volume Primo. | [short rule] | Bologna | Dai
Pipi Del Nobili E Comp. | 1825.

2 vols. [VOL 1] 12°: 240 p., errata page, 1 folded
table and 1 folded plate. [VOL 2] 12°: 252 p. PAGE SIZE:
190 x 130 mm. VERY SCARCE.

REFERENCES: Personal communication: [Renato and
Adriana Pagano].



DE LA CRISTALLISATION, 1819

863. — French, 1819.

De | La Cristallisation | Considérée |
Géométriquement Et Physiquement, | Ou | Traité
Abrégé De Cristallographie, | Suivi D'un | Précis
De Nos Connoissances Actuelles | Sur Les |
Phénomènes Physiques De La Cristallisation. | Par
| A.J.M. Brochant De Villiers, | [...5 lines of titles
and memberships...] | [ornate rule] | A Strasbourg,

| De l'imprimerie de F.G. Levrault, imprimeur du
Roi. | 1819.

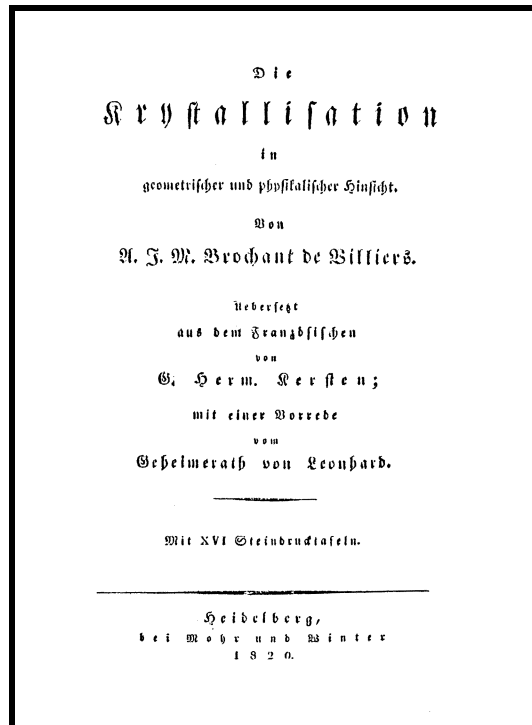
8°: [i]-vij, [8]-206 p., 16 plates (numbered I to
XVI). PAGE SIZE: 204 x 124 mm.

CONTENTS: [i-ii], Half title page, "De | La
Cristallisation | Considérée | Géométriquement et
Physiquement," verso blank.; [iii-iv], Title page, verso
blank.; [v]-vij, "Avertissement.;" [8], Blank.; [9]-190, Text.;
[191]-199, "Table Des Matières.;" [200], Blank.; [201]-206,
"Tableau Indicatif | des Figures.;" [At end], 16 plates.

PLATES: Of the 16 plates, the first 2 show
goniometers and apparatus, while the remainder show
crystal diagrams.

VERY SCARCE. Discusses the crystallographic
theories of Weiss, Beudant, Leblanc, Gay-Lussac, etc.,
but especially the principles laid down by Haiüy, with
whom he collaborated. Observations on geometrical
and physical properties are included. This work is
an expansion of the article Brochant prepared for the
Dictionnaire des Sciences Naturelle (Paris, ???). It is
written in such a manner as to provide the beginner
with a textbook but useful information to the expert as
well. The first part provides a geometrical description of
crystals based on Haiüy's theories. In this Brochant has
been helped by the careful examination of the collection
of the School of Mines. The second part theoretically
describes the physical phenomenon of crystallization,
which had occupied the authors studies for some time.

REFERENCES: Ward & Carozzi, *Geology Emerging*,
1984: no. 324.



DIE KRYSTALLISATION, 1820

864. German transl., 1820: Die | Krystallisation | in | geometrischer und physikalischer Hinsicht. | Von | A.J.M. Brochant de Villiers. | Uebersetzt | aus dem Französischen | von | G. Herm. Kersten; | mit einer Vorrede | vom | Geheimerath von Leonhard. | [tapered rule] | Mit XVI Steinbruktafeln. | [tapered rule] | Heidelberg, | bei Mohr und Winter | 1820.

8°: xx, 200 p., 16 plates

VERY SCARCE. Translation by G. Herm. Kersten [see note below] of *De la Cristallisation Considérée Géométriquement et Physiquement* (Paris, 1819). It also includes a forword authored by KARL CÄSAR VON LEONHARD concerning the merits of the work.

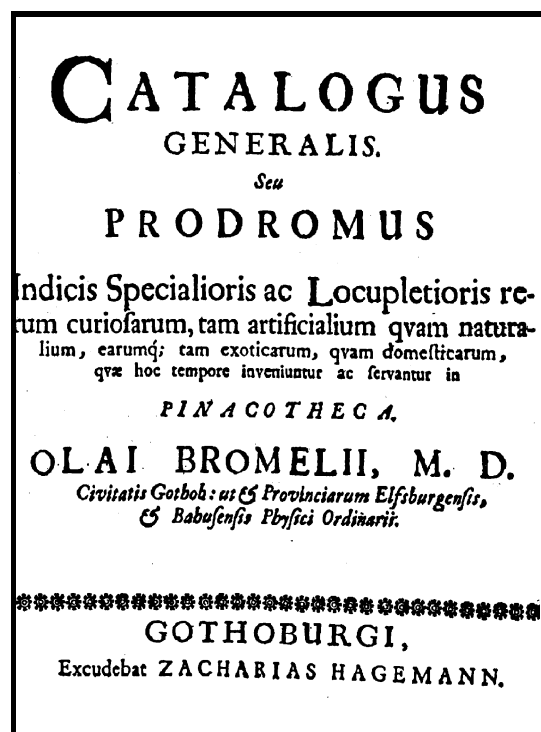
REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 169.

BROCKHAUSEN, Johann Theodor Eller Von.

See: Eller Von Brockhausen, Johann Theodor.

BRÖGGER, Waldemar Christopher.

See: Brögger, Waldemar Christofer.



CATALOGUS GENERALIS, 1698

BROMEL, Olof (Olaus). (BORN: Örebro, Sweden, 24 May 1639; DIED: Göteborg, Sweden, 5 February 1705) *Swedish physician.*

Father of MAGNUS VON BROMELL.

REFERENCES: Poggendorff: 1, col. 306. • SBA: Scandinavian Biographical Archive: B-036, 279-282. • Svenskt Biografiskt Handlexikon: 1, 140. • Svenskt Biografiskt Lexikon: 6, 387-91, bibliogr. [by S. Birger]. • Warmholtz, *Bibliotheca Sueo-Gothica*, 1782-1817: 2, ?? & 12, ??. • WBI.

865. — Latin, 1698 [Collection catalog].

Catalogus | Generalis. | Seu | Prodromus | Indicis Specialioris ac Locupletioris re- | rum curiosarum, tam artificialium quam natura- | lium earumq; tam exoticarum, quam domesticarum, | quæ hoc tempore inveniuntur ac servantur in | Pinacotheca. | Olai Bromelii, M.D. | [2 lines of titles and memberships] | [ornate rule] | Gothoburgi, | Excudebat Zacharias Hagemann.

4°: A-B⁴; 8l.: [16] p.

CONTENTS: [1-2], Title page, verso blank.; [3]-[16], Text.

RARE. The first catalog describing objects of natural history published in Sweden. It is written in the form of a prospectus or proposal for a larger never published work. It was based upon the author's own cabinet of specimens, of which minerals were clearly a major component.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 29. • Collijn, *Sveriges Bibliografi, 1600-Talet*, 1942-6: 1, 114-5. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 280. • Löwegren, *Naturalienkabinett i Sverige*, 1952: 56-8. • Murray, *Museums*, 1904: 1, 35 & 2, 141. • Warmholtz, *Bibliotheca Sueo-Gothica*, 1782-1817. • Wilson, *History of Mineral Collecting*, 1994: 162 & 207.

BROMELIUS, Magnus von.

See: Bromell, Magnus Von.



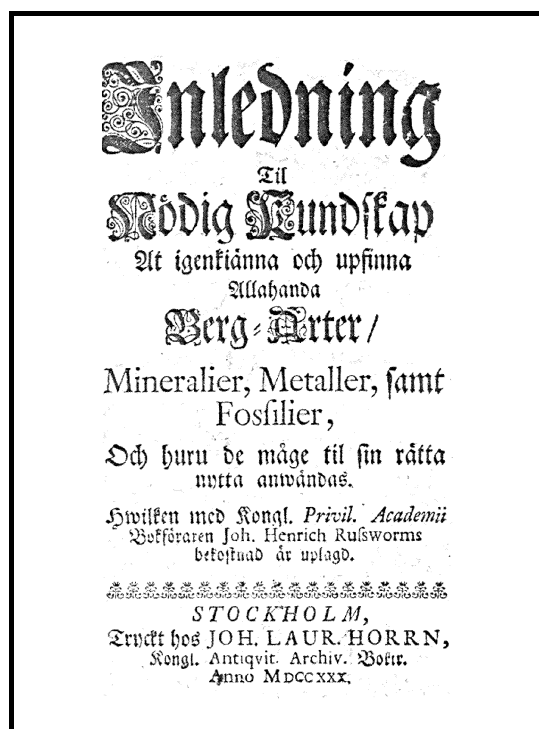
BROMELL

BROMELL, Magnus von. (BORN: Stockholm, Sweden, 26 March 1679; DIED: Stockholm, Sweden, 26 March 1731) *Swedish physician & mineralogist.*

The son of the physician O. BROMELIUS, Magnus chose the surname Bromell when he was raised to the nobility. From 1697 to 1704, Magnus had a far ranging education in Holland, England and France. Upon his return home he displayed a thorough knowledge of medicine, anatomy, chemistry and botany. Bromell became a professor of anatomy at the Collegium Medicum in Stockholm, before being elected head of the Institute in 1724. Being an accomplished chemist and mineralogist, Bromell was appointed to the Board of Mines, where in 1720 he was named assessor. On the death of U. HJÄRNE in 1724, Bromell succeeded him as head of the chemical laboratory.

BROMELL

REFERENCES: Almquist, *Bergskollegium*, 1909: p. 180. • *Biographiskt Lexicon*. • Cleavelly, *World Palaeontological Collections*, 1983: 67. • *De Rebus*, Uppsala: Nos. 1 & 2, 1973-4. • DSB: 2, 490 [by S. Lindroth]. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 584 [by Hedenius]. • Hult, O., "Några anmärkningar om Olof och Magnus Bromelius," *Svenska Linnésällskapet Årsskrift*, 1926. • Lambrecht & Quenstedt, *Catalogus*, 1938: 60. • Poggendorff: 1, cols. 305-6. • Regnell, *Paleontology in Sweden*, 1948. • SBA: Scandinavian Biographical Archive: B-036, 283-291. • *Svenskt Biografiskt Handlexikon*: 1, 140. • *Svenskt Biografiskt Lexikon*: 6, 392-401, portrait, biblio [by O.T. Hult]. • Thomas, *Dictionary of Biography*, 1884: 439. • Warmholtz, *Bibliotheca Sueo-Gothica*, 1782-1817: 1-3, ??, 10, ??, 13, ??, & 15, ?? • WBI. • Wilson, *History of Mineral Collecting*, 1994: 162. • Zenzén, *Bergskollegii Mineralsamling*, 1921.



INLEDNING TIL NÖDIG KUNDSKAP, 1730

866. — Swedish, 1730 [First edition].

Inledning | Til | Nödig Kundskap | At igenkiänna och upfinna | Allahanda | Berg=Arter / | Mineralier, Metaller, samt | Fosfilier, | Och huru de måge til sin rätta | nytta användas. | Hwilkén med Kongl. Privil. Academii | Bokföraren Joh. Henrich Russworms | bekostnad är uplagd. | [ornate rule] | Stockholm, | Tryckt hos Joh. Laur. Hornn, | Kongl. Antiquit. Archiv. Boktr. | Anno MDCCXXX.

8°:)(8 2):(4 A⁴ B-F⁸ G⁴; 60L.; [24], [1]-95, [1] p.
PAGE SIZE: 155 x 100 mm.

CONTENTS: [2 pgs], Title page, verso dedication to Friedrich the I.; [4 pgs], "Stormächtigste / | Allernädigste | ..."; [5 pgs], "Bewägne Läsare."; [1 pgs], "Kongl. May:ts | Nådige | Placat | och | Förordning | ..."; [10 pgs],

"Wt[?] Friedrich med Suds..."; [2 pgs], Contents.; [1]-95, Text, page 95, printer's device.; [1 pg], Blank.

VERY SCARCE. This modest, little mineralogy had a profound influence upon the subsequent development of mineral classification. Designed as a handbook to help the Swedish naturalist in their mineralogical studies it is written for a threefold purpose. First, to distinguish and recognize the principal minerals, and to instruct the reader upon the proper names of rocks and ores, their nature, habit and use. Second, to describe which types of useful minerals should be found in Sweden, and third, which metals and minerals had already been found in the kingdom. This last section emphasises those minerals and ores for which additional deposits needed to be located.

In this work, Bromell uses chapters to separate the divisions of the minerals, ores and petrifications. Within each chapter the properties of the group are described. By this method, the author developed a mineral classification that employs both physical and chemical properties. He divides minerals into earths, salts, sulphur and sulphurous rocks, stones, minerals and semimetals, and ores and metals. These divisions parallel the classifications of JOHN WOODWARD and URBAN HJÄRNE. Like Agricola, Bromell subdivides the earths according to their use, into medicaments, earths used by painters and dyers, earths used for cleaning and polishing, earths used in ceramics, fertilizers, earthy ores, and fuels. However, in this early attempt at physical-chemical distinction, for the class of stones, Bromell is the first mineralogist to group together species according to the more consistent property of the minerals behavior in fire.

Through his father, Bromell became a passionate collector of minerals and fossils. He had inherited the cabinet begun by his father and had considerably added to its numbers. While studying the collection, he became curious about the effect fire had on various specimens. Employing the crude qualitative techniques of the era, various samples of what were classified as stones by Bromell were placed in fire and the resulting reactions recorded. This led Bromell to categorize stones into four subdivisions: fire-resistant stones, stones that calcine, stones that become harder and stones that fuse and become glass. Since a stone's chemical composition ultimately determined its reaction in the fire, and therefore the category to which it was assigned, Bromell foreshadowed the more elaborate chemical classification system to be developed later by FRIEDRICH AXEL CRONSTEDT. Bromell also demonstrates by his emphasis upon describing the properties of minerals his interest in an orderly description of their natural characters.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906. • Dana's 7th (Bibliography): 68. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 43. • LKG: XII 20. • Nathorst, A.G., "Sveriges geologi allmänförfattligt framställd med en inledande historik om den geologiska forskningen i Sverige (1892-94) jämte ett flertal arbeten i mineralogiens historia," ???????: ??, ??.. • NUC: 77, 488 [NB 0834032]. • St. Clair, *Classification of Minerals*, 1966. • Wallerius, *Brevis*

Introductio, 1779: 68.

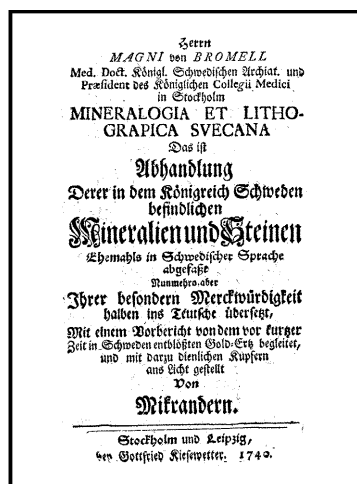
867. 2nd edition, 1739: Afledna | Vice Præsidentens, Archiaterns | och Medicinæ Doctorens, | Herr Magni von Bromells | Minera- | logia, | Eller | Inledning til nödig kundskap at | igenkiänna och upfinna | Allahanda | Berg=Arter / Mineralier, | Metaller samt Fossilier, | Och huru de måge til sin, rätta | nytta användas. | Andra Gängen uplagd / | Och med ett fullkommligt Register förökt. | [rule] | Stockholm, | På Gottfried Kieselwettters bekostrand, | 1739.

8^o:):(8 2):(4 A⁴ B-F⁸ G⁴ 2A-2D⁴ 2E³; 79ℓ.; [24], [1]-95, [1], [36], [2] publisher's list p. PAGE SIZE: 165 x 93 mm.

CONTENTS: [2 pgs], Title page, verso dedication to Friedrich the I.; [4 pgs], "Stormächtigste / | Allernädigste | ..."; [5 pgs], "Bewägne Läsare."; [1 pg], "Kongl. May:ts | Nädige | Placat | och | Förordning | ..."; [10 pgs], "Wt[?] Friedrich med Suds..."; [2 pgs], Contents.; [1]-95, Text, page 95 printer's device.; [1 pg], Blank.; [36 pgs], "Register."; [2 pgs], "Catalogus..."

VERY SCARCE. Essentially a reissue of the 1730 text with the addition of a comprehensive index.

REFERENCES: Dana's 7th (Bibliography): 68. • LKG: XII 20. • NUC: 77, 488 [NB 0834033]. • Roller & Goodman, *Catalogue*, 1976: 1, 171. • Sallander, *Bibliotheca Walleriana*, 1955: no. 12123.



MINERALOGIA, 1740

868. German transl., 1740: Herrn Magni von Bromell | [... lines of titles and memberships...] | Mineralogia et Litho- | Grapica Svecana | Das ist | Abhandlung | Derer in dem Königreich Schweden befindlichen | Mineralien und Steinen | Ehemahls in Schwedischer Sprache | abgefaßt | Nunmehr aber | Ihrer besondern Merckwürdigkeit | halben ins Teutsche übersetzt, | Mit einem Vorbericht von dem vor kurtzer | Zeit in Schweden entblösten Gold=Ertz begleitet, | und mit darzu dienlichen Kupfern | ans Licht gestellt | Von Mikrandern. | [double rule] | Stockholm und Leipzig, | bey Gottfried Kieselwetter. 1740.

8^o:):(8 2):(6 A-J⁸ K²; 88ℓ.; [28], [1]-148 p., 80 woodcuts, folding map facing page 132. PAGE SIZE: 165 x 93 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorrede | des Übersetzers."—dated 2 October 1733; [7 pgs], "Geneigter Leser."; [7 pgs], "Vorbericht. | Von dem Anno 1738. in | Smoland geschursften Gold= | Ertze."; [8 pgs], "Inhalt."; [1]-148, Text.

VERY SCARCE. Translation by "Mikrandern" [i.e., pseudonym for Karl Ernst Klein] of *Mineralogia*, *Eller Inledning til nödig kunskap at igenkiänna* (2nd ed.,

Stockholm, 1739). In addition, this work also includes in chapter eight an abstracted translation of Bromell's paleontological treatise, *Lithograpica Suecana*. The original of which first appeared in *Acta literaria Sveciæ*, 2 (1725–9) & 3 (1730–4).

Karl Ernst Klein. (BORN: ; DIED: Stockholm, Sweden, after 1752). Klein worked as an advisor to the goverment and produced German translations of several Swedish books.

REFERENCES: BMC: 1, 254. • *Freilich Sale Catalog*: no. 98. • Gatterer, *Mineralogischen Literatur*, 1798–9: 1, 167. • NUC: 77, 488 [NB 0834034]. • Roller & Goodman, *Catalogue*, 1976: 1, 171. • Sallander, *Bibliotheca Walleriana*, 1955: no. 12124. • Ward & Carozzi, *Geology Emerging*, 1984: no. 328. (Klein) Jöcher, *Gelehrten-Lexikon*, Supplement: (1810), col. 456.



BRONGNIART

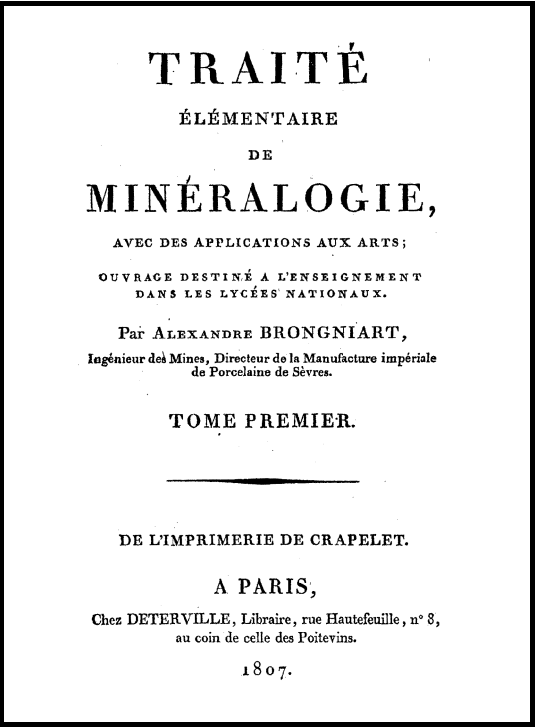
BRONGNIART, Alexandre. (BORN: Paris, France, 5 February 1770; DIED: Paris, France, 7 October 1847) *French geologist & mineralogist.*

Alexandre was the brother of the famous French biologist, Adolphe-Theodore [1801–1876]. As a student, Brongniart had studied chemistry with A. LAVOISIER. In 1794, he graduated with a degree in mine engineering. He was appointed a professor of the Société Gymnastique from 1787 to 1794. From 1797, he was also a professor at the École Centrale, Collège des Quatre Nations. In 1800, he accepted the directorship of a porcelain factory in Sèvres, France. While there, he helped develop the science of ceramic chemistry. From 1818, Brongniart was the chief engineer of mines for the French nation.

REFERENCES: ABF: I 158, 164–171, 173–175; II 103, 152. • Barr, *Index to Biographical Fragments*, 1973: 35. • Cleavelly, *World Palæontological Collections*, 1983: 68. • DBF: 7, cols. 419–20 [by J. Silvestre de Sacy]. • DSB: 2, 493–7 [by M.J.S. Rudwick]. • *ISIS*, 1913–65: 1, 195. • Lambrecht & Quenstedt, *Catalogus*, 1938: 61. • Poggendorff: 1, col. 306. • Sarjeant, *Geologists*, 1980: 2, 627. • Thomas, *Dictionary of Biography*, 1884: 439. • WBI. • *World Who's Who in Science*: 248.

869. — French, 1807 [First edition].

Traité | Élémentaire | De | Minéralogie, Avec Des Applications Aux Arts; | Ouvrage Destiné A L'Enseignement | Dans Les Lycées Nationaux. | Par Alexandre Brongniart, | Ingénieur des Mines, Directeur de la Manufacture impériale | de Porcelaine de Sèvres. | Tome Premier [-Seconde]. | [tapered rule] | De L'Imprimerie De Crapelet. | A



TRAITÉ ÉLÉMENTAIRE DE MINÉRALOGIE, 1807

Paris, | Chez Deterville, Libraire, rue Hautefeuille, n° 8, | au coin de celle des Poitevins. | 1807.

2 vols. [VOL 1] 8°: π^6 A-Z⁸ 2A-2N⁸; 288 ℓ .; [i]-xij, [1]-564 p.; [VOL 2] 8°: π^2 A-Z⁸ 2A-2D⁸ 2E⁶; 224 ℓ .; [4], [1]-443, [1] errata p., 16 engraved plates printed on 15 folding ℓ . PAGE SIZE: 194 x 120 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, "Traité | Élémentaire | De | Minéralogie," verso blank.; [iii]-iv, Title page, verso blank.; [v]-xij, "Préface."; [1]-564, Text.

[Vol 2] [2 pgs], Half title page, "Traité | Élémentaire | De | Minéralogie," verso blank.; [2 pgs], Title page, verso blank.; [1]-406, Text.; [407]-420, "Explication Des Planches."; [421]-443, "Table."; [1 pg], "Errata."; [At end], 16 plates on 15 folding leaves.

PLATES: Depictions on the 16 plates include apparatus, crystal drawings and diagrams, geological cross sections, mining equipment and building plans. The plates are signed in a fashion similar to Siadenier's sc.

SCARCE. Brongniart's *Traité* was the product of a commission to prepare a text for use in the mineralogical courses taught by RENÉ JUST HAÜY and the author at the *Faculté des Sciences* and the *Muséum d'Histoire Naturelle*. For this purpose, the author created a simple classification system based primarily on physical properties, but also influenced by Haüy's crystallographic theories. Brongniart insisted that studying how minerals occurred as well as their properties would lead to a better understanding of their origin. The work is largely directed to economic aspects of the science. The introduction is a thorough treatment of mineralogical principles, which is followed by an overview of the classification scheme, a table of the same

and a detailed descriptive mineralogy that extends to the second volume.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 442, no. 37. • Beekman, *Systematische Mineralogie*, 1906: 120. • Dana's 7th (Bibliography): 68. • DSB: 2, 494 [by M.J.S. Rudwick]. • *Freilich Sale Catalog*: no. 99. • Hoover Collection: no. 170. • Lambrecht & Quenstedt, *Catalogus*, 1938: pp. 60-1. • LKG: XII 228. • Norman Catalog: 1, 351. • NUC: 77, 534-6 [NB 0835185]. • Roller & Goodman, *Catalogue*, 1976: 1, 171. • Sinkankas, *Gemology Bibliography*, 1993: no. 953.

870. — French, 1827.

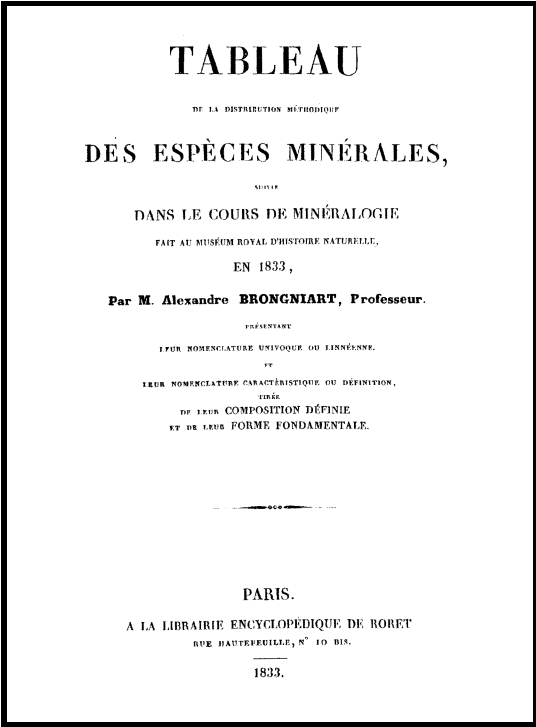
Classification | Et | Caractères Minéralogiques | Des Roches | Homogènes et Hétérogènes. | Par | Alexandre Brongniart, | Membre De L'Académie Royale Des Sciences. | [ornament] | A Paris, | Chez F.G. Levrault, rue de la Harpe, n.º 81, | et rue des Juiss, n.º 33, à Strasbourg. | 1827.

8°: [2], [1]-144 p.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-140, Text.; 141, "Table Des Matières."; 142-144, "Table Alphabétique Des Noms."

VERY SCARCE. An early mineralogical classification and description of rocks according to ABRAHAM GOTTLÖB WERNER's theories. In this work, Brongniart first proposed the word "melaphyre" for one type of basalt.

REFERENCES: NUC: 77, 534-6 [NB 0835149]. • Roller & Goodman, *Catalogue*, 1976: 1, 171. • Zittel, *History of Geology*, 1901: p. 727.



TABLEAU, 1833

871. — French, 1833.

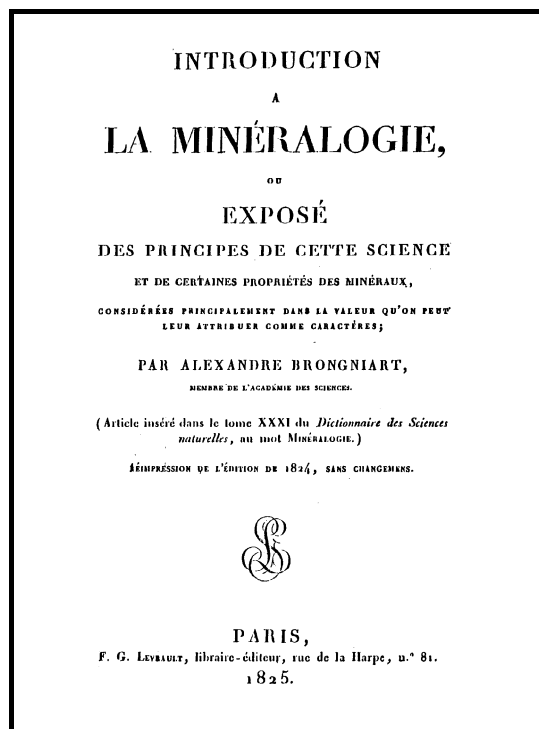
Tableau | De La Distribution Méthodique | Des Espèces Minérales, | Suivie | Dans Le Cours De Minéralogie | Fait Au Muséum Royal D'Histoire Naturelle, | En 1833, | Par M. Alexandre Brongniart, Professeur. | Présentant | Leur Nomenclature Univoque Ou Linnéenne, | Et | Leur Nomenclature Caractéristique Ou Définition, | Tirée | de leur Composition Définie | et de leur Forme Fondamentale. | [ornate rule] | Paris. | A La Librairie Encyclopédique De Roret | Rue Hautefeuille, N° 10 Bis. | [rule] | 1833.

8°: [1]-46, [2] p. PAGE SIZE: 215 x 146 mm.

CONTENTS: [1-2], Title page, verso "Imprimé Chez Paul Renouard, Rue Garençière, N. 5."; [3]-10, "Exposé Des Principes | Sur Lesquels Est Fondée | La Classification Adoptée Dans Ce Tableau."; [11]-46, "Tableau | Méthodique Et Caractéristique | Des Espèces Minérales."; [1 pg], Errata.; [1 pg], Blank.

VERY SCARCE. Provides a general theory for the principles used in classifying mineral species. It is a further expose first proposed in the author's *Traité de Minéralogie* (Paris, 1807).

REFERENCES: Dana's 7th (Bibliography): 68.



INTRODUCTION A LA MINÉRALOGIE, 1825

872. — French, 1825 [First separate issue].

Introduction | A | La Minéralogie, | Ou | Exposé | Des Principes De Cette Science

Et De Certaines Propriétés Des Minéraux, | Considérées Principalement Dans La Valeur Qu'on Peut | Leur Attribuer Comme Caractères; | Par Alexandre Brongniart, | Membre De L'Académie Des Sciences. | (Article inséré dans le tome XXXI du Dictionnaire des Sciences | naturelles, au mot Minéralogie.) | Léimpression de l'édition de 1824, sans changemens. | [ornament] | Paris, | F.G. Leveault, libraire-éditeur, rue de la Harpe, n.° 81. | 1825.

8°: 159 p., 2 plates. "Article insere dans le tome XXXI du Dictionnaire des Sciences naturelles, au mot Mineralogie."

VERY SCARCE. Separate printing of the mineralogy article published in volume 31 of the *Dictionnaire des Sciences Naturelles* (Paris, 1824). It is a comprehensive introduction to the science.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 171. • Ward & Carozzi, *Geology Emerging*, 1984: no. 337.



BRONN

BRONN, Heinrich Georg. (BORN: Ziegelhausen near Heidelberg, Germany, 3 March 1800; DIED: Heidelberg, Germany, 5 July 1862) *German geologist & paleontologist.*

Bronn studied at the University at Heidelberg where he took his doctor's degree in the faculty of medicine in 1821. The following year he was appointed professor of natural history. He now devoted himself to palaeontological studies, and to field-work in various parts of Germany, Italy and France. His principal work, *Letkæa Geognostica* (2 vols., Stuttgart, 1834-8; 3rd ed. with F. Romer, 3 vols., 1851-6), has been regarded as one of the foundations of German stratigraphical geology. In 1861 Bronn was awarded the Wollaston medal by the Geological Society of London.

REFERENCES: ADB. • *American Journal of Science*: Series 2, **34** (1862), 304. • Cleavelly, *World Palæontological Collections*, 1983: p. 68. • DBA: I 148, 219-221. • DSB: 2, 497-8. • *Encyclopaedia Britannica*, 11th edition. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • *Jahrbuch der k.k. Geologischen Reichsanstalt*, Wien: **12** (1861-2), 262-4. • Kettner, Radim., "Heinrich Georg Bronn

BROOKES

(1800, +1862),” *Casopis pro Mineralogii a Geologii*, **7** (1962), pt. 1, 102-3. • *Leopoldina*: **3** (1862), 88. • *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie: Festschrift*, 1907, portrait. • Poggendorff: **1**, cols. 307 & 1544. • *Proceedings of the Geological Society, London*: **1863**, p. xxxii-xxxiii. • Rudwick, *Meaning of Fossils*, 1972. • Sarjeant, *Geologists*, 1980: **2**, 628. • WBI.

873. — German, 1830.

Gäa Heidelbergensis, | oder | Mineralogische Beschreibung | der | Gegend von Heidelberg. | Mit einer | petrographischen Karte. | Von | Dr. Heinr. G. Bronn, | Professor und mehrer gelehrten Gesellschaften Mitglieder. | [tapered rule] | Heidelberg und Leipzig, | Neue academische Buchhandlung von Karl Groos. | [short rule] | 1830.

8°: x, 237 p., one petrological/geological map (folding).

RARE. This is basically a description of the geology in the area around Heidelberg in Germany. It contains only minor mineralogical content, being mostly devoted to petrological and geological analysis. A petrological map illustrates the text.

REFERENCES: BL: [7106.aaa.28.]. • *Katalog Bergakademie Freiberg*, 1879: p. 98 [IX. 1725.]. • Partsch, *Katalog der Bibliothek*, 1851: no. 1216.

Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefaktenkunde. Herausgegeben von K.C. v. Leonhard und H.G. Bronn. (Stuttgart, 1830).

See: *Neues Jahrbuch Für Mineralogie*.

BROOKE, Henry James. (BORN: Exeter, Devonshire, England, 25 May 1771; DIED: London, England, 26 June 1857) *English mineralogist & crystallographer*.

Brooke first studied law, but eventually became a merchant. He began in the Spanish wool trade, followed by ventures in South American mining companies and the London Life Assurance Association. As a pastime, he began to collect minerals. This collection subsequently passed to his son, who in 1857 presented it to Cambridge University, Dept. of Mineralogy. Brooke was elected a Fellow of the London Geological Society in 1815 and a Fellow of the Linnean Society in 1818. Eventually, Brooke was also elected a Fellow of the Royal Society in 1819. In his honor, the mineral “Brookite” was named after him by A. LÉVY in 1825.

REFERENCES: BBA: I 151, 292-293. • Cleavelly, *World Palaeontological Collections*, 1983: 68. • DNB: **2**, 1335 [by G. Goodwin]. • Poggendorff: **1**, cols. 307-8. • *Proceedings of the Geological Society, London*: **9** (1858), 41 & **14** (1858), xlv-xlv. • Sarjeant, *Geologists*, 1980: **2**, 628. • WBI. • Woodward, *History of the Geological Society*, 1907: 10-11, portrait (facing p. 10).

874. — English, 1823.

A | Familiar Introduction | To | Crystallography; Including An Explanation Of The | Principle And Use Of The Goniometer. | With an Appendix, | Containing | The Mathematical Relations Of Crystals; | Rules For Drawing Their Figures; | And An Alphabetical Arrangement Of Minerals, | Their Synonyms, And Primary Forms. | [rule] | Illustrated By Nearly 400 Engraving On Wood. | [rule] | By Henry James Brooke, F.R.S. F.L.S. &

c. | [rule] | London: | Printed & Published By W. Phillips, George Yard, Lombardstreet; | Sold Also By W. & C. Tait, Edinburgh; | And R. Millikin, Dublin. | [rule] | 1823.

8°: π^4 b⁴ A-Z⁴ 2A-2Z⁴ 3A-3R⁴ 3S²: 262ℓ.; [i]-xv, [1], [1]-508 p., 391 text diagrams. PAGE SIZE: 192 x 115 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to “the inventor of the Reflective Goniometer” [W.H. Wollaston]; [iv], Blank.; [v]-xi, “Introduction.”; [xii], Blank.; [xiii]-xv, “Table of Contents.”; [xvi], “Corrigenda.”; [1]-24, “Definitions.”; [25]-32, “Of the Goniometer.”; [33]-35, “Section I. General View.”; [36]-52, “Section II. Molecules.”; [53]-55, “Section III. Structure.”; [56]-66, “Section IV. Cleavage.”; [67]-76, “Section V. Decrements.”; [77]-78, “Section VI. Symmetry.”; [79]-85, “Section VII. Primary Forms.”; [86]-87, “Section VIII. Secondary Forms.”; [88]-92, “Section IX. Hemitrope and Intersected Crystals.”; [93]-94, “Section X. Epigene and Pseudomorphous Crystals.”; [95]-104, “Section XI. On the Tables of Modifications.”; [105]-213, “Tables of Primary Forms and their Modifications.”; [214]-222, “Table of Secondary Forms.”; [223]-231, “Section XII. On the Application of the Tables of Modifications.”; [232]-252, “Section XIV. [!] On the Use of Symbols for Describing the Secondary Forms of Crystals.”; [253]-282, “On the Relation of the Laws of Decrement to the Different Classes of Modifications.”; [283], “Appendix.”; [284], Blank.; [285]-392, “Appendix. Calculation of the Laws of Decrement.”; [393]-401, “On the Direct Determination of the Laws of Decrement from the Parallelism of the Secondary Edges of Crystals.”; [402]-438, “On the Methods of Drawing the Figures of Crystals.”; [439]-450, “On Mineralogical Arrangement.”; [451]-497, “An Alphabetical Arrangement of Minerals, with their Synonymes and Primary Forms.”; [498]-501, “Table of the Primary Forms of Minerals, arranged according to their Classes.”; [502]-508, “Index.”

VERY SCARCE. Dedicated to William Wollaston, inventor of the reflecting goniometer, this book proposes a new system of crystallographic notation. Brooke uses a method of letters and subscript figures to indicate crystal forms. For the primary forms or primitive, he chose the capitals P, M, T (from *primitive*). Secondary and other faces were noted with other letters in small type. Sweet (1978) suggests that this particular nomenclature was developed by Brooke from Count Bournon’s treatise on calcite, which allocated numbers to each form found.

This work had great influence on the course of crystallography during its time.

REFERENCES: *Boston Journal of the Philosophical Arts*: **1** (1823), 298-99 [by J.W. Webster]. • Dana’s 7th (Bibliography): 68. • Roller & Goodman, *Catalogue*, 1976: **1**, 172. • Smith, *Early Mineralogy in Great Britain*, 1978: 65.

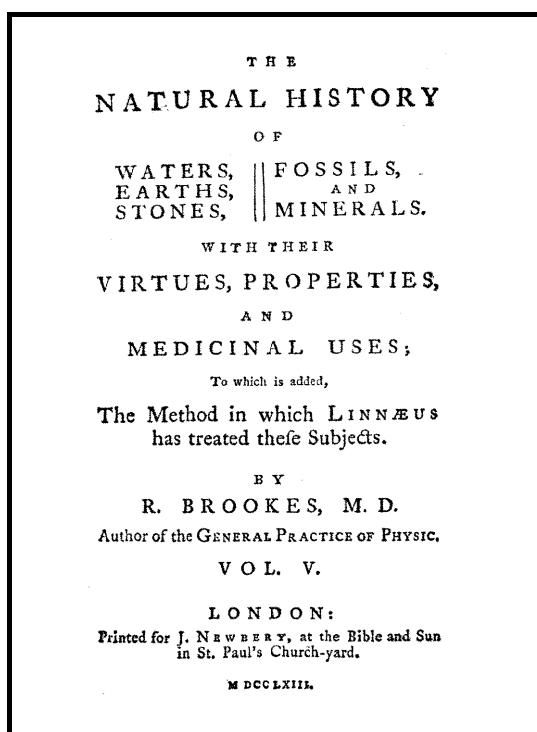
An Elementary Introduction to Mineralogy. New edition, with extensive alterations and additions, by H.J. Brooke and W.H. Miller. (London, 1852)

See: Miller, William Hallows.

BROOKES, Richard. *English physician & writer*.

Brookes was probably a physician and the author of other books on medicine. The medical uses of minerals and animals are considered in his *New System*.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 52, 38-43. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



NATURAL HISTORY, 1763

875. — English, 1763 [First edition].

[General title page reads:] A | New and Accurate | System | of | Natural History; | Containing | I. The History of Quadrupeds, including Amphibious | Animals, Frogs, and Lizards, with their Properties and | Uses in Medicine. | II. The History of Birds, with the Method of bringing up | those of the singing Kind. | III. The History of Fishes and Serpents, including | Sea-Turtles, Crustaceous and Shell-Fishes; with their me- | dicinal Uses. | IV. The History of Insects, with their Properties and Uses | in Medicine. | V. The History of Waters, Earths, Stones, Fossils, | and Minerals; with their Virtues, Properties, and | Medicinal Uses; To which is added, the Method | in which Linnæus has treated the Subjects. | VI. The History of Vegetables, as well Foreign as Indige- | nous, including an Account of the Roots, Barks, Woods, | Leaves, Flowers, Fruits, Seeds, Resins, Gums, and con- | creted Juices; as also their Properties, Virtues, and Uses | in Medicine; together with the Method of cultivating | those planted in Gardens. | By R. Brookes, M.D. | Author of the General Practice of Physic. | In Six Volumes. | London: | Printed for J. Newbery, at the Bible and Sun, in | St. Paul's Church-Yard. | MDCCLXIII.

[TITLE OF VOLUME 5 READS:]

The | Natural History | of | Waters and Earths, | of | Stones, Fossils, | and | Minerals. | Including The | Observations of Linnæus | on those subjects. | With Their | Properties and Uses in Medicine. | [rule] By R. Brookes, M.D. | Author of the General Practice of Physic, &c. | [rule] Volume V. | [rule] The Second Edition, Corrected. | [double rule] London, | Printed for T. Carnan and F. Newbery, jun. | at Number 65, in St. Paul's Church-Yard. | MDCCLXIII.

6 vols. [VOL 1: 1763] 12°: [1]-8, [ix]-xliii, [1], [1]-374, [10] p., ?? plates. (Quadrupeds). [VOL 2: 1763] 12°: [i]-xx, [1]-460, [i]-xvi p., ?? plates. (Birds). [VOL 3: 1763] 12°: [i]-xxi, [1], [1]-408, [12] p., ?? plates. (Fishes). [VOL 4: 1763] 12°: [i]-xv, [1], [1]-360, [12] p., ?? plates. (Insects). [VOL 5: 1763] 12°: [i]-vi, [i]-xliii, [1], [1]-364, [14] p., ?? plates (Minerals). [VOL 6: 1763] 12°: [i]-xii, [1]-437, [1], [i]-x p., ?? plates. (Botany). PAGE SIZE: 170 x 100 mm.

CONTENTS: [Vol 1] [1-2], General title page, verso blank.; [3-4], Title page, verso blank.; [5]-8, "The | Contents."; [ix]-xxiv, "The | Preface."; xxv-xliii, "Introduction."; [1 pg], Blank.; [1]-374, Text.; [10 pgs], The | Index."

[Vol 2] [i-ii], Title page, verso blank.; iii-v, "Contents."; [vi], Blank.; vii-x, "Table | To The | Plates of Birds."; xi-xx, "Introduction | Of | Birds in General."; [1]-460, Text.; [i]-xvi, "Index."

[Vol 3] [i-ii], Title page, verso blank.; iii-v, "Contents."; [vi], Blank.; vii-x, "Table | To The | Plates of Birds."; xi-xxi, "Introduction | To The | History of Fishes."; [1 pg], Blank.; [1]-408, Text.; [12 pgs], "Index."

[Vol 4] [i-ii], Title page, verso blank.; iii, "Contents."; [iv], Blank.; [v]-vi, "Table | To The | Plates of Insects."; vii-xv, "Introduction | To The | History of Insects."; [1 pg], Blank.; [1]-360, Text.; [12], "Index | Of The | English Names."

[Vol 5] [i-ii], Title page, verso blank.; iii-iv, "Contents."; [v]-vi, "Table to the Plates | of | Minerals and Fossils."; [i]-xliii, "The | Prefatory | Introduction."; [1 pg], Blank.; [1]-364, Text.; [14 pgs], "The | Index."

[Vol 6] [i-ii], Title page, verso blank.; iii, "Contents."; [iv]-xii, "Introduction | of Botany in General."; [1]-437, Text.; [1 pg], Blank.; [i]-x, "Index | of the | English Names."

VERY SCARCE. A very popular series, this is a comprehensive encyclopedia of natural history, contemporary but independent of Buffon's *Histoire Naturelle*, which was started in 1763. Illustrated with 145 engravings, each showing several figures, Brooke extracts from the works of previous authors in his descriptions of the realms of nature, most notably Linnaeus. The introduction to volume one tells that the author had traveled to Africa and America, and that the work utilizes the systems of Ray and Linnaeus. The fifth volume is devoted to the earth and objects found within, and includes studies of minerals, fossils, volcanoes, earthquakes and magnets, which is illustrated with engraved plates. Brookes basically follows the theories of Linnaeus in his description of how minerals are classified.

The set has the following volume titles: Vol 1.

BROWN

Quadrupeds, Vol 2. Birds, Vol 3. Fishes and Serpents, Vol 4. Insects, Vol 5. Water, Earths, Stones, Fossils, Vol 6. Botany.

3rd edition, 1790: A New and Accurate System of Natural History. Third edition, corrected. London, MDCCXC. 6 vols. [Vol 1] 408 p.; [Vol 2] 317 p.; [Vol 3] 258 p.; [Vol 4] 324 p.; [Vol 5] 312 p.; [Vol 6] 322 p. Black and white illustrations are scattered through out the volumes. The fifth volume describes earths, stones, fossils, and minerals.

REFERENCES: Bernard Quaritch, Bookseller: cat. 1001, no. 8. • Freeman, *Natural Science Books in English*, 197?: no. 505. • Nissen (ZBI): no. 598. • NLM 18th Century Books (Blake): p. 66. • Wellcome Catalog (Books): 2, 246.

BROWN, David E.

876. — English, 1899 [Catalog].

Catalogue of Rocks, Fossils, and Minerals, supplied by the Mining Department. Collection prepared by D.E. Brown, under the supervision of J. Stirling, Government Geologist. [Melbourne, 1899].

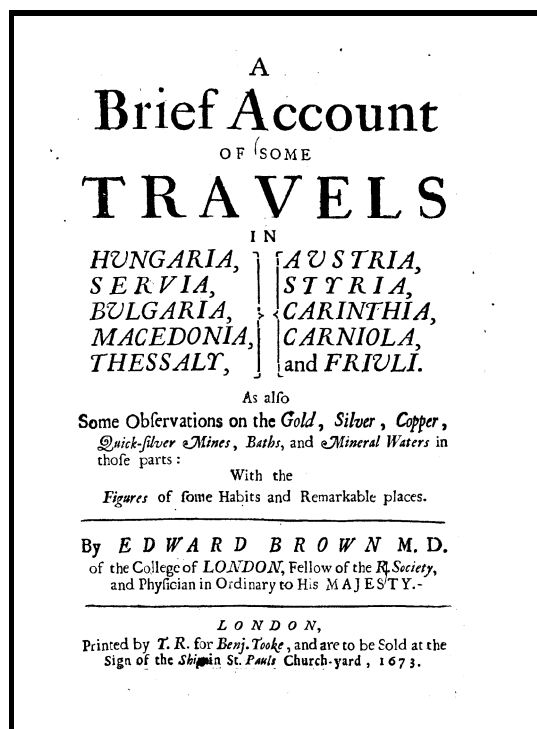
8°: vii, 32 p., 16 plates. RARE.

REFERENCES: BL: [7959.b.46.]. • BMC: 5, 2213. • Ferguson, *Bibliography of Australia*, 1941-69: ??.

BROWN, Edward. (BORN: 1642; DIED: 27 August 1708) *English physician.*

Brown was a highly regarded doctor, who served as Physician-in-Ordinary to Charles II and was later appointed president of the Royal College of Physicians.

REFERENCES: Poggendorff: 1, col. 310 & 1544?.



BRIEF ACCOUNT, 1673

877. — English, 1673 [First edition].

A | Brief Account | Of Some | Travels | In | [Two
columns of countries:] Hungaria, | Servia, | Bulgaria,
| Macedonia, | Thessaly, | Austria, | Styria, |
Carinthia, | Carniola, | and Friuli. | As also |
Some Observations on the Gold, Silver, Copper, |
Quick-silver Mines, Baths, and Mineral Waters in
| those parts: | With the | Figures of some Habits
and Remarkable places. | [rule] | By Edward Brown
M.D. | [...2 lines of titles and memberships...] | [rule]
| London, | Printed by T.R. for Benj. Tooke, and
are to be Sold at the | Sign of the Ship in St. Pauls
Church-yard, 1673.

4°: A⁴ (A1 blank) b² B-T⁴ V²; 80l.; [12], 1-144,
[4] p., 9 plates (4 folding). Plates at pages 4/5, 22,
38/39, 66, 85, and 120. PAGE SIZE: 198 x 150 mm.

CONTENTS: [2 pgs], Blanks.; [2 pgs], Title page, verso
blank.; [3 pgs], Dedication, signed Edward Brown.; [1 pg],
Blank.; [4 pgs], "To The | Reader."; 1-144, Text.; [2 pgs],
Publisher's list.; [1 pg], Errata.; [1 pg], Blank.

RARE. An observant traveler, Brown recorded all
the natural and historical objects and features he saw,
as well as anything the bore on his medical profession.
For his grand tour, he made a difficult tour through
the eastern regions of Europe. The present volume
is a pleasant account of his travels in the 1668-9s
through the mineral rich regions of Hungary, Austria,
and Carinthia, with observations on many gold, silver,
copper, mercury works. During 1668-9 Brown was
in Vienna and undertook the journeys he describes.
Like his near contemporary and fellow physician Martin
Lister (1638-1712), author of *A Journey to Paris* (1698),
Brown discourses on the geography, social customs and
history of the areas in which he traveled.

Facsimile reprint, 1971: New York, Arno Press, 1971.

REFERENCES: BL. • Goldsmith's *Catalogue of Economic
Literature*: no. 2025. • Hoover Collection: no. 172. • LKG:
XIV 832a. • Osler, *Bibliotheca Osleriana*, 1969: no. 4409. •
Wing: no. 5110.

878. Second edition, 1685: A brief account of some travels in
divers parts of Europe, viz. Hungaria, Servia, Bulgaria,
Macedonia, Thessaly, Austria, Styria, Carinthia, Carniola,
and Friuli. Through a great part of Germany, and the
Low-countries. Through Marca Trevisana, and Lombardy
on both sides of the Po. With some observations on the
gold, silver, copper, quick-silver mines, and the baths and
mineral waters in those parts. As also, the description
of many antiquities, habits, fortifications and remarkable
places. By Edward Brown, M. D. The 2d ed. with many
additions. London, Printed for Benj. Tooke, at the Sign of
the Ship in St. Paul's Church-yard, 1685.

2°: [4], 222, [4] p., illus., plates (part fold.)

VERY SCARCE. The first edition of 1673 had only 144 p.
and 9 plates and to this is added in this edition Brown's *An
Account of Several Travels through a Great Part of Germany*
(1677), and with the addition of *A Journey from Venice to
Genoa* (pp. 194-222).

REFERENCES: BL. • Cox, *Guide to the Literature of
Travel*, 1948-50: 1, 88. • Duveen, *Bibliotheca Alchemica et
Chemica*, 1965: p. 103. • Hoover Collection: no. 173. •
Wing: B-511.

879. — English, 1677.

An Account of Several Travels through a Great

Part of Germany: In four Journeys. I. From Norwich to Colen. II. From Colen to Vienna, with a particular Description of that Imperial City. III. From Vienna to Hamburg. IV. From Colen to London. Wherein the Mines, Baths, and other Curiosities of those Parts are Treated of. London, Benjamin Tooke, 1677.

4°: [4], 179, [1] p., 6 plates (3 folding).

VERY SCARCE. A different working of the author's *Brief Account of Some Travels* (1st ed., London, 1673), including new commentary.

REFERENCES: BL. • Cox, *Guide to the Literature of Travel*, 1948-50: 1, 108. • LKG: XIV 832a. • Wing: B-5109.

BROWN, Henry Yorke Lyell.

880. — English, 1893.

Catalogue | Of | South Australian Minerals, | With The | Mines And Other Localities Where Found; | And | Brief Remarks On The Mode Of Occurrence Of Some | Of The Principle Metals And Ores. | [ornate rule] | Prepared under the authority of the Hon. the Commissioner of Crown Lands. | By | H.Y.L. Brown, F.G.S., | Government Geologist. | [ornate rule] | Adelaide: | By Authority: C.E. Bristow, Government Printer, North-Terrace. | [short rule] | 1893.

8°: [1]-34 p. Printed wraps. Errata slip tipped in at page one. PAGE SIZE: 9.5 x 6in.

CONTENTS: [1-2], Title page, verso blank.; [3]-4, "Preface."—signed H.Y.L. Brown, 10 April 1893.; [5]-34, "Catalogue of South Australian Minerals."

VERY SCARCE. A topographical mineralogy being an early listing of the various mineral species found in South Australia, together with an indication which mines have produced the specimens. Brown has derived the listing from various departmental sources, and he has arranged the species alphabetically.

REFERENCES: Ferguson, *Bibliography of Australia*, 1941-69: ?? . • NUC.

BROWNE, Patrick. (BORN: Woodstock, Mayo, Ireland, 1720?; DIED: Rushbrook, Mayo, Ireland, 29 September 1790) *English botanist & naturalist*.

Browne studied medicine in Paris, graduating from the University of Rheims in 1742. He found work at St. Thomas' Hospital, London. Subsequently, he moved to the Caribbean, where he lived in Antigua, Jamaica, Saint Croix and Montserrat, before retiring to County Mayo in 1771.

REFERENCES: DNB: 7, 53. • *Journal of Botany*: 1902, p. 139 & 1924, p. 351. • Nissen (BBI): p. 25.

881. — English, 1755 [First edition].

The civil and natural history of Jamaica. In three parts. Containing, I. An accurate description of that island ... with a brief account of its former and present state, government, revenues, produce, and trade. II. A history of the natural productions ... native fossils ... III. An account of the nature of climates in general, and their different effects

upon the human body. By Patrick Browne, M.D. London, Printed for the author, and sold by T. Osborne and J. Shipton, 1756.

2°: [4], viii, 503, [2] p., one folding map of Jamaica, a rare large folding map of Kingston and 49 copperplates (38 of flora, 11 of fauna) by George Dionysius Ehret.

VERY SCARCE. While a student, Browne began a lifelong correspondence with LINNAEUS, who inspired his researches in natural science, especially botany. When he moved to the West Indies, he made his important observations on the flora, fauna and geology of the island of Jamaica. Sabin reports that the print-run of the first edition was limited to only 250 copies. "All the copperplates as well as the original drawings used in the work were consumed in the great fire in Cornhill 7 Nov. 1765" (DNB). Most of the plates were drawn by Georg Dionysius Ehret [1708-1770].

Facsimile reprint, 1972: *The civil and natural history of Jamaica*. New York, Arno Press, 1972. viii, 503 p. illus., fold. map. Published as part of the series, *Research Library of Colonial Americana*.

REFERENCES: LKG: XIV 902. • Plesch, *Stiftung für Botanik Auction*, 1975-6: pp. 159-60. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 1253. • Sabin, *Dictionary*, 1868-1936: no. 8670.

882. 2nd edition, 1789: Civil and Natural History of Jamaica Containing I. An accurate Description of that Island, its Situation, and Soil; with a brief Account of its former and present State, Government, Revenues, Produce, and Trade. II. An History of the Natural Productions, including the various Sorts of native Fossils; Perfect and Imperfect Vegetables; Quadrupeds, Birds, Fishes, Reptiles, and Insects; with their Properties and Uses in Mechanics, Diet, and Physic. London, sold by B. White & Son, 1789.

2°: viii, 503, [48 (Linnaean Names, Index of Vegetables and Animals)] p., one folding map and 49 copper plates by George Dionysius Ehret. Errata following text. Includes bibliographical references and index.

VERY SCARCE. Second illustrated edition, generally considered to be the best edition, with four additional indexes.

Cundal Bibliographia Jamaicensis 416

Patrick Browne was born c.1720 at Woodstock, Claremorris, Co. Mayo and died at Woodstock in his native county. The Brownes of Woodstock, near Crossboyne, were a minor branch of the Brownes of Castlemacgarrett. Patrick received, his early education in Mayo and at the age of sixteen was sent to live with a relative in Antigua, one of the English islands in the Caribbean, which at that time had a substantial number of Irish-born landowners. A year later he returned to Europe to study medicine at the University of Paris. He graduated with the degree of Doctor of Medicine and went to London where he practised in St. Thomas's Hospital before returning to the West Indies around 1746. After spending ten years in Jamaica making his living as a physician, he returned to England, and brought with him a substantial collection of dried and pressed plants, preserved fishes and other zoological specimens. While there he commissioned the renowned botanical artist Georg Dionysius Ehret to prepare the illustrations for his proposed book. The first edition was published on 10 March, 1756, as Browne himself tells us in a letter to Linnaeus. The Civil and Natural History of Jamaica is considered one of the greatest natural history books of the eighteenth century, and in many respects second only to the earliest works of Carl Linnaeus, who wrote of Browne "you ought to be honoured with a Golden Statue". In this substantial work Browne

BRÜCKMANN

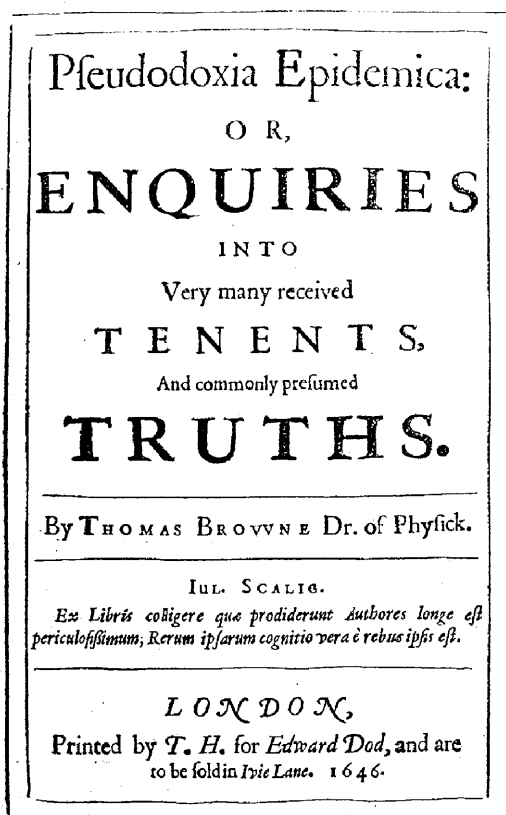
catalogued Jamaican plants and animals, classified the rocks and soils, and recounted briefly the history of the island and its government. More than half the book is devoted to the description of the native and cultivated plants of the island, with quite a substantial section on animals.

REFERENCES: Nissen (BBI): no. 155. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 1253. • Sabin, *Dictionary*, 1868-1936: no. 8671.

BROWNE, Thomas, Sir. (BORN: 1605; DIED: 1682)
English physician & author.

Browne was one of the great English writers of the seventeenth century as well as a physician. He is principally remembered for his *Religio Medici* that expounds his personal religious philosophy and the tenets by which he lived.

REFERENCES: DNB: 3, 64-72. • DSB: 2, 522.



PSEUDODOXIA EPIDEMICA, 1646

883. — **English, 1646** [First edition, 2nd state].

[Contained within a double rule box:] Pseudodoxia Epidemica: | Or, | Enquires | Into | Very many received | Tenents, | And commonly presumed | Truths. | [rule] | By Thomas Brovvne Dr. of Physick. | [rule] | Iul. Scalig. | Ex Libris colligere quæ prodiderunt Authores longe est | periculosissimum; Rerum ipsarum cognitio vera è rebus ipsis est. | [rule] | London, | Printed by T.H.

for Edward Dod, and are | to be sold in Ivie Lane. 1646.

4°: a⁵ b⁴ A-Z⁴ Aa-Zz⁴ Aaa⁴ Bbb⁵; ??ℓ.; [20], 386 p. (Page nos. 251 and 317 misprinted 151 and 217.) PAGE SIZE: 274 x 186 mm.

VERY SCARCE. This is one of the author's great works marked by enormous research and learning. Browne attacks false traditions, superstitions and folklore relating to the nature of plants, animals, minerals, and man. Commonly refereed to as "Vulgar errors" (from the running header), it probably owes its creation to commonplace books compiled by Browne when traveling in Ireland and the Continent. However, the *Pseudodoxia Epidemica* also includes observations on a number of topics including physics, comparative anatomy and biology made by Browne himself. The first use of the word "Electricity" occurs on page 51 and the first use of the word "Mineralogist" occurs on page —.

REFERENCES: Cushing: B-774. • DSB: 2, 522. • Gascoigne, *Historical Catalogue of Scientists*, 1984: 2127.1. • Keynes, *Bibliography of Sir Thomas Browne*, 1968. • NLM 17th Century Books (Krivatsy): no. 1834. • Norman Catalog: no. 358. • Osler, *Bibliotheca Osleriana*, 1969: no. 4488. • Roller & Goodman, *Catalogue*, 1976: 1, 174. • Sallander, *Bibliotheca Walleriana*, 1955: no. 19462. • Wellcome Catalog (Books): 2, 253. • Wing: B-5159.



FRANZ ERNST BRÜCKMANN

BRÜCKMANN, Franz Ernst. (BORN: Marienthal near Helmstädt, Germany, 27 September 1697; DIED: Wolfenbüttel, Saxony, Germany, 21 March 1753) *German physician & naturalist.*

In 1721, Brückmann went to Helmstadt study medicine. After graduating, he opened a practice in Braunschweig, then in 1728 he moved to Wolfenbüttel. From 1747 he was also held the position of Assessor for the Collegium Medicum in Braunschweig. His son was URBAN FRIEDRICH BENEDICT BRÜCKMANN, who wrote on gemstones and his adopted son was Friedrich Börner [1723-1761], who became a famous doctor. Brückmann wrote on a broad

range of subjects related to natural history and religion, and for support of his studies, he accumulated both a large library and collection of natural history objects. He was a member of the Berlin Academy and the Leopoldian Academy, to which he was elected on May 8, 1725.

REFERENCES: Börner, *Vornehmsten Lebensumständen*, 1749-64: 1 (1748/49), 31-51, 376-92, 905-9, 2 (1752), 419-739 & 3 (1753-64) 365-69. • *Biographie Universelle*: 5, 668-9. • *Catalogue of Portraits of Naturalists*: 230-1 [1 portrait listed]. • DBA: I 150,11-100; II 184,241-244. • Drugulin, *Sechstausend Portraits*, 1863: nos. 681-4. • *Encyclopaedia Britannica*, 11th edition. • Ferchl: 71. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 128. • *Geschichte bl. f. Technik, Industrie und Gewerbe*: 3 (1916), 8 f., 170, 5 (1918), 295 f. & 9 (1922), 100. • Götten, G.W., *Das Jetzt-lebende Gelehrte Europa*. Braunschweig, 1735-40. 3 vols: 1 (1735), 655-69, 2 (1736), 816 f. & 3 (1737-40), 790. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 594 [by M. Salomon]. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Kaiser, W. and W. Piechocki, "Wechselbeziehungen zwischen der östlichen Slowakei und Halle-Wittenberg in medizinhistorische Sicht," *NTM*, 5 (1968), Heft 12, 49-69, facimiles, portrait. • Kubacska, A., "Paläontologie Beobachtungen aus Ungarn zu Beginn der 18. Jahrhunderts," *Földtani Közöny*, 58 (1929), 235-8. • Lambrecht & Quenstedt, *Catalogus*, 1938: 64. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16: 1, 613-23. • NDB: 2, 655-6 [by R. Zaunick]. • NY Academy Portrait Catalog: 1 [4 portraits listed]. • Poggendorff: 1, cols. 312-3. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • Thomas, *Dictionary of Biography*, 1884: 447. • WBI. • Wellcome Catalog (History): 14 [other refs.].

884. — Latin, 1721.

Francisci Ernesti | Brückmanni | Medicin. Cultor. | Specimen | Physicum | exhibens | Historicam naturalem | Oolithi | seu | Ovariorum piscium et concharum in | saxa mutatorum. | [ornament] | Helmstadii, | [double rule] | Typis Salomonis Schnorrii. | MDCCXXI.

4°: [4], 28 p., illus. RARE.

REFERENCES: BL: [444.c.16.(3.)]. • LKG: XVI 382.

885. — Latin, 1722.

Relatio brevis physica De cvriosissimis dvabus conchis marinis, qvarvm vna vvlva marina et altera concha venerea nominatvr, in chartum coniecta et cvm orbe ervdito commvnicata. Cvm figvr. aeneis a Fr. Ernest. Brückmanno. Brunsvigae, 1722.

4°: 24 p., one plate.

RARE. This work of Brückman, is devoted to a brief description of two very rare marine shells contained in the author's collection whose form appears to be connected with that of the human female sex organ. A plate illustrates the work.

REFERENCES: NUC.

886. — Latin, 1722.

De fabulosissimae originis lapide arachneolitho dicto a Franciscus Ernestus Brückmann. Wolffenhüttelae, Meisner, 1722.

4°: 16 p., one plate. RARE.

REFERENCES: BL: [1179.b.14.(3.)]. • LKG: XVII 174 & 175.



MAGNALIA DEI IN LOCIS SUBTERRANEIS, 1727

887. — German, 1727-34.

[In black:] Magnalia Dei | In | Locis Svbterraneis | Oder | [in red:] Unterirdische Schatz = Kammer | [in black:] Aller | [in red:] Königreiche und Länder, | [in black:] In Ausführlicher Beschreibung | [in red:] Aller, mehr als | MDC. Bergwerke | [in black:] Durch | [in red:] Alle vier Welt=Theile, | [in black:] Welche | Von Entdeckung derselben bis auf gegenwärtige Zeit gebauet | worden, und noch gebauet werden; in was Stand sie jemahls gewesen/ | und wie sie jetzo beschaffen; was vor Ertze / Steine und Berg=Arten aus solchen jemahls gewonnen / und noch zu Tage ausgefördert werden; | Nebst | [in red:] Anmerckung aller derjenigen Länder und Oerter/ | wo Edelgesteine zu finden/ | In Geographischer Ordnung und einigen Kupffer=Figuren | [in black:] zu besichtigen dargestellet | von | [in red:] Francisco Ernesto Brvckmann, | [in black:] Med. Doct. Acad. Caesar. Nat. Cvriosor. Et Soc. Reg. Prvs. Scient. Colleg. Et Pract. Brvnsvic. | [ornament] | [rule] | Braunschweig MDCCXXVII [-MDCCXXX].

2 parts and supplement. [Part 1: 1727] 2°: π^6 A-4Z² (a)-(d)²; 198 ℓ .; [12], [1]-368, [16] p., frontispiece (portrait of Brückmann), 13 folding plates. Title in red and black.; [Part 2: 1730] 2°: π^1)(2):(1 2):(2 3):(1 χ^2 2)(2 A-13O²; 591 ℓ .; [18] p., 38 plates, [4], [1]-1136,

BRÜCKMANN

[24] p. Title in red and black.; [Supplement: 1734] 2°: 64, [3] p., 2 plates. PAGE SIZE: 336 x 206 mm.

CONTENTS: [Part 1] [Frontispiece].; [2 pgs], Title page, verso blank.; [2 pgs], "Avtoris Editā."; [2 pgs], Dedication to several persons, signed F.E. Brückmann.; [2 pgs], "Catalogus | Der Respective Herren Subscribenten."; [3 pgs], "Vorrede."—signed F.E. Brückmann, 1 December 1726.; [1 pg], Poem, signed David Frühauff, 18 February 1727.; [13 plates].; [1 pg], "Ausführliche Beschreibung | Und | Designation | Aller Bergwerke | in | Evropa."; [1-2], Table of contents.; [3]-368, Text.; [15 pgs], "Register | Aller Berg=Oerter."; [1 pg], "Bericht an der Buchbnder."

[Part 2] [2 pgs], Title page, verso "Senec | ..."; [4 pgs], Dedication to eight persons, signed F.E. Brückmann.; [4 pgs], "Vorrede."—signed F.E. Brückmann, 1 September 1730.; [2 pgs], "Continvatio | Editorvm Avtoris."; [2 pgs], "Catalogvs | Der Respective Herrn Svbscribenten."; [4 pgs], Poem in Latin, signed Francisco Ernesto Brückmann.; [38 plates].; [1 pg], "Ausführliche Beschreibung | Und | Designation | Aller Bergwerke | In | Evropa. | Thvbal, Japhets fünfter Sohn / ist ein Vater | der Bergwerke in Evropa."; [1 pg], Table of contents.; [2 pgs], "Theophrastus Paracelsus | Vom | Bergwercks=Bau."; [1]-1136, Text.; [22 pgs], "Register | Aller Berg=Oerter."; [2 pgs], "Die vornehmste Druckfehler."

[Supplement] No copy examined.

PLATES: Most of the folio sized, engraved plates of both parts are unsigned and numbered in Roman numeral. They illustrate various items discussed in the text, including minerals, scenic views, maps, and equipment.

[Part 1] Frontispiece. Picture of the head and torso of Brückmann within an oval frame behind a drawn curtain. The frame sits on top of a pedestal with the wording "Franciscus. Ernestus. Brückmann. Medicin. Doct. Brunsvicensis." The plate is signed Creite sc. in the lower left-hand corner. I. Mineral specimens & crystals. II. Scenic view. III. Mineral specimens & crystals. IV. Map. V. Mineral specimens & crystals. VI. Hoist house. VII-XI. Map. XII. Gold-Basche in America. XIII. The silver works at Potosi in Peru.

[Part 2] I-III. Mineral specimens & crystals. IV-VI. Mine plans. VII. Ornamental stone sample & mine plan. VIII-X. Mine plans. XI. Scenic view (folding). XII-XVII. Scenic views. XVIII. Map (folding). XIX-XXIII. Maps. XXV. Map & rock samples. XXVI. Minerals specimens & map. XXVII. Ornamental stone. XXVIII. Rock & geode samples. XXIX-XXX. Mine plans. XXXI. Scenic view. XXXII-XXXIII. Minerals specimens & crystals. XXXIV-XXXVII. Scenic views.

VERY SCARCE. This work is an early geographically divided guide to mining throughout Europe with references to mining in the New World. Part one uses individual chapters to treat the countries of Portugal, Spain, France, Germany, England, Scotland, Ireland, The Netherlands, Switzerland, Italy, Denmark, Norway, Sweden, Poland, Russia, Hungary, Turkey and Greece. There is also considerable additional discussion of mining activities in America and Spanish America. The text recounts various descriptions of individual mines and entire districts and the materials mined. These descriptions include frequent mention of the individual minerals processed, which in some cases are illustrated on the accompanying plates. Details are also included about the discovery and history of the mining operations. The second part retains the same format as the first, but greatly expands information by including much new material.

The very rare supplement describes the world fa-

mous mining works of Sweden and was published in Wolfenbüttel in 1734.

REFERENCES: Cobres, *Deliciae Cobresianae*, 1782: 2, 677-8. • Dana's 7th (Bibliography): 68. • *Freilich Sale Catalog*: no. 102. • Hoover Collection: no. 181 [part 1 only]. • LKG: XIV 2. • Roller & Goodman, *Catalogue*, 1976: 1, 175. • Schröter's *Journal für die Liebhaber*: 1 (17??), pt. 2, 18. • Ward & Carozzi, *Geology Emerging*, 1984: no. 354.

888. — Latin, 1727.

Fr. Ernest. Brvckmanni | [...2 lines of titles and memberships...] | Specimen physicvm | Sistens | Historiam | Natvralem | Lapidis Nvmmalis | Transsylvaniae. | [ornament] | Wolfenbvttelae | [rule] | MDCCXXVII.

4°: 15, [1] p., illus. (on title page). RARE.

REFERENCES: BL: [444.c.16.(6.)]. • Hoover Collection: no. 183. • LKG: XVII 134*.

889. — Latin, 1727.

F.E. Brvckmanni, | [...3 lines of titles and memberships...] | Historia | Natvralis Cvriosa | Lapidis *tov' Asbestov*, | Eivsqve | Praeparatorvm, | Chartae Nempe, Lini, Lintei | Et | Ellychniorvm Incombvstibilivm. | [vignette] | [double rule] | Brvnsvigae MDCCXXVII.

4°: A-F4; 24l.; [1]-48 p., title vignette.

RARE. This is an early description of the naturally occurring fibrous substance generally called "Asbestos," that is now know to be one of the six minerals chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite. Asbestos was known to the ancients and its miraculous property of resistance to burning was widely thought to be magical. The ancient Greeks used asbestos in their cloth and the Romans used it in their building materials. Here, Brückmann provides a short history and description of asbestos.

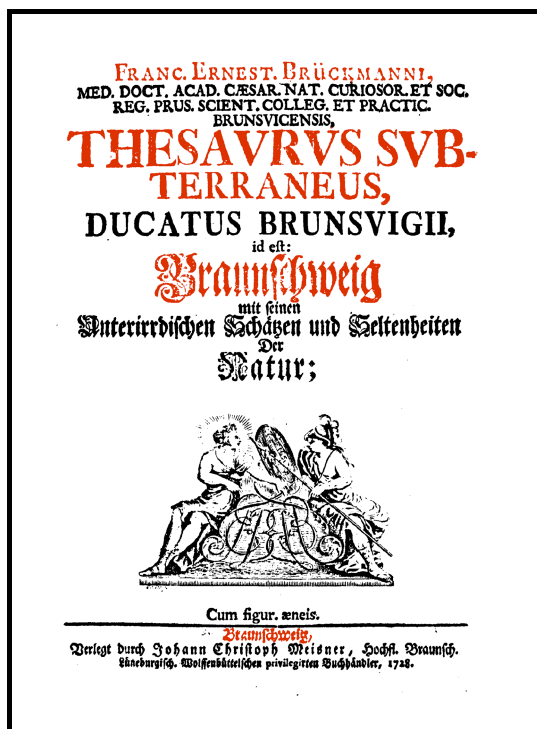
REFERENCES: BL: [444.c.14.(6.)]. • Hoover Collection: no. 180. • LKG: XVI 107.

890. — German, 1728.

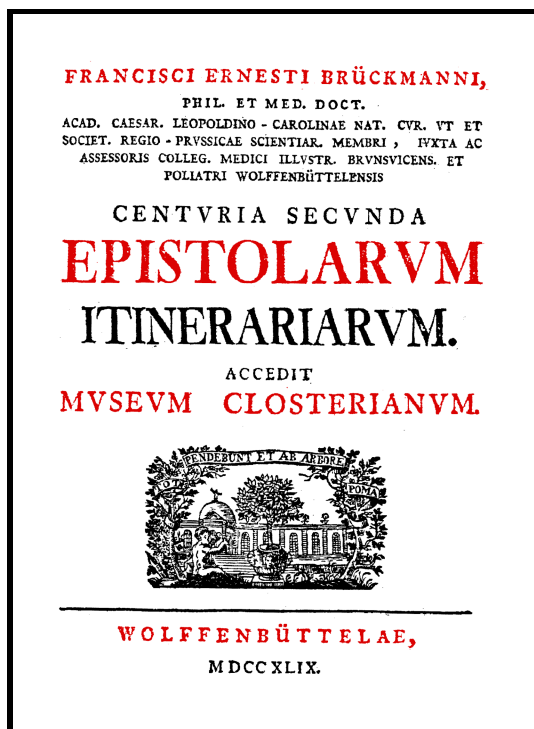
[In red:] Franc. Ernest. Brückmanni, | [...in black, 3 lines of titles and memberships...] | [in red:] Thesavrvs Sv- | terraneus, | [in black:] Ducatus Brunsvigii, | id est: | [in red:] Braunschweig | [in black:] mit seinen | Unterirrdischen Schätzen und Seltenheiten | Der | Natur; | [ornament] | Cum figur. æneis. | [rule] | [in red:] Braunschweig, | [in black:] Verlegt durch Johann Christoph Meisner, Hochfl. Braunsch. | Lüneburgisch. Wolfenbüttelschen privilegirten Buchhändler, 1728.

4°: [4], [1]-155, [1] p., 26 plates (2 folding), title in red and black, title vignette and engraved dedication leaf.

VERY SCARCE. An early work on local geology describing and illustrating the fossils found in the region of Brunswick. Also included (pp. 141-4) is a bibliography of other works on paleontology. The plates show various fossils.



THESAVRVS SVBTERRANEUS, 1728



EPISTOLARUM ITINERARIARUM CENTVRIA, 1742

REFERENCES: BL: [444.c.16.(7.)]. • Cobres, *Deliciæ Cobresianæ*, 1782: 2, 753 ["Gut"]. • Edwards, *Early History of Palæontology*, 1976: p. 38. • Freyberg, *Geologische Erforschung Thüringens*, 1932. • Hoover Collection: no. 184. • LKG: XIV 143. • Schröter's *Journal für die Liebhaber*: 1 (1772), pt. 2, 20.

891. — Latin, 1742-50.

Francisci Ernesti Brückmanni, | [...4 lines of title and memberships...] | Centvria | Epistolarvm | Itinerariarvm. | [rule] | Accedit Epistola | I.G. Büchneri, consil. | De | Memorabilibus Vogtlandiæ | Svbterraneis. | [vignette] | [rule] | Wolffenhüttelae, MDCCXLII.

[TITLE PAGE OF VOLUME 2:]

[In red:] Francisci Ernesti Brückmanni, | [...in black, 5 lines of titles and memberships...] | Centvria Secvnda | [in red:] Epistolarvm | [in black:] Itinerariarvm. | Accedit | [in red:] Mvsevm Closterianvm. | [in black, ornament] | [rule] | [in red:] Wolffenhüttelae, | MDCCXLIX.

[SEPARATE TITLE PAGE OF ADDED TRACT:]

Mvsevm | Closterianvm | Sive | Catalogvs Rervm | Tam Arte Factarvm, Qvam Natvra- | Livm, Tam Exoticarvm, Qvam | Domesticarvm, | Ex | Triplici Natvrae Regno, | Qvas | Fridericvs Lavrentivs | von Jemgvmr Closter | [...4 lines of titles and memberships...] | [rule] | Halae Svevor. MDCCXLVI.

[TITLE PAGE OF VOLUME 3:]

[In red:] Francisci Ernesti Brückmanni | [...in black, 5 lines of titles and memberships...] | Centvriae Tertiae | [in red:] Epistolarvm | [in black:] Itinerariarvm | LXXV VLTIM. | [in red:] Cvm Indice. | [in black, ornament] | [rule] | [in red:] Brvnsvigae | [in black:] In Officina Libraria Schroederiana | MDCCCLVI.

3 vols. [VOL 1: 1728-42] 4°: [6], c900 p., 81 plates. [VOL 2: 1744-49] 4°: π^2 A-7T⁴ 7U² A-G⁴ H²; 802 ℓ .; [4], [1]-1296, [44], [1]-60 p., 45 plates, 22 maps. [VOL 3: 1750-53] 4°: π^1 A-6N⁴; 510 ℓ .; [2], [1]-998, [20] p., 28 plates on 22 ℓ . PAGE SIZE: 210 x 165 mm.

CONTENTS: [Vol 1] [Frontispiece].; [2 pgs], Title page, verso blank. [4 pgs], Preface.; [1]-c900, Text.

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], Dedication to Carolo Gvilielmo Ferdinando.; [1 pg], Blank.; [1]-1296, Text.; [43 pgs], "Index."; [1 pg], Blank.

[Appended at the end of volume two is the Museum Closterianum, 1746] [1-2], Title page, verso blank.; [3]-11, Dedication to Francisco Ernesto Bruckmanno, signed Friderico Laurentio de Jemgvmr Closter, 4 October 1746.; [12]-40, Text.; 41-60, "Alter Pars | De | Artefactis."

[Vol 3] [2 pgs], Title page, verso blank.; [1]-998, Text.; [20 pgs], "Index."; [At end], Plates IX-XXVIII.

EXTREMELY RARE, in complete, unbroken sets. Although individual Epistola can be found. A highly interesting collection of letters covering many topics of interest to natural history, including mineralogy, geology, and zoology. Dedicated to Sir Hans Sloane and the Royal Society. It is particularly rich in material about the geology and fauna of the Harz region of

BRÜCKMANN

Germany. The first 72 letters give interesting and diverse accounts of excursions throughout Germany, with particular reference to paleontology. One section describes Brückmann's Museum of Metallic Specimens.

The *Epistolæ* seems to have been originally published separately, and each has an original title page of earlier date than the complete collection. Ferguson, J. (1906) says, "The *Epistolæ Itinerariæ* in three hundred numbers appeared between 1726-1753. They were afterwards collected in six volumes, with title pages. A list of those referring to mineralogy, etc., is contained in Leupold's *Prodromus Bibliothecæ Metallicæ* (Wolffenbüttel, 1732, p. 37)." However, Ferguson was incorrect, only 275 epistola were published, not 300.

Contents: The volumes comprise 275 separate "Epistolæ" or letters on a wide variety of subjects, each with their own title page and in many cases their own pagination. The general form for the title pages is they are printed in black with Brückmann's name and accomplishments at the top followed by the Epistola number, the title/subject of the letter, the addressee name and accomplishments and concluding with place of publication and year. For purposes of brevity the following list provides details only on the Epistola number, title, addressee, publication information and pagination.

[Volume 1]

I. De | Bibliothecis | Vindobonensibus | Praecipuis, | ... | Lavrentivm Hertel, | ... | Wolffenbvtellae, Anno Christi 1728. 4^o:)(4; no pagination; 1 plate showing a monster. [Text dated 1 October 1728].

II. De | Chrysocolia | A Neosoliensi | Hungarica, | ... | Johann. Heinric. Linck, | ... | Wolffenbvtellae, Anno Christi 1728. 4^o:)(4)(4^v blank). [Text dated 1 November 1728].

III. De | Bellariis Lapideis Liptoviensibus | Hungaricis, | ... | Johann. Heinric. Burchard, | ... | Wolffenbvtellae, Anno Christi 1728. 4^o:)(4, one folding plate (showing minerals). [Text dated 1 December 1728].

IV. De | IV. Figuratis Curiosis Rupibus Ad Faucibus Hercyniae Sylvae Prope Ilfeldam, | ... | Dom. Protectorem, | ... | Wolffenbvtellae, Anno Christi 1729. 4^o:)(4, 2 plates (scenic views). [Text dated 3 January 1729].

V. De | Templo Cathedrali Viennensi D. Stephano Dicato, | ... | Wolffenbvtellae, 1729. 4^o:)(4, one plate ("Tab. V"). [Text dated 1 February 1729].

VI. De | Ovo Gallinaceo | Figurato Et Terra | Vlricana, | ... | Dn. Ioh. David. Möllervm, | ... | Wolffenbvtellae, 1729. 4^o:)(4, one plate (St. Maria). [Text dated 1 March 1729].

VII. De | Figvratiss et Aliis | Qvibvsdam Cvriosis | Lapidibus | in | Electoratu Hannover Ano Obviis, | ... | Dom. Albertvm Ritter, | ... | Wolffenbvtellae, 1729. 4^o:)(4, 2 plates ("VI-VII," showing fossil shells). [Text dated 2 April 1729].

VIII. Sistens | Memorabilia | Bambergensia, | ... | Frid. Christian. Lesser, | ... | Wolffenbvtellae, 1729. 4^o: A4 B2, one plate (holy relic). [Text dated 1 May 1729].

IX. Sistens | Animalia Rariora | Viridarii Viennensis | Evgenii Francisci | ... | Avg. Wilh. Toepffer, | ... | Wolffenbvtellae, 1729. 4^o:)(4. [Text dated 1 June 1729].

X. De | Terrestri Cole | ... | Christ. Ge. Schwalbe, | ... | Wolffenbvtellae, 1729. 4^o:)(4, one folding plate (seeds). [Text dated 1 July 1729].

XI. De | Qvibvsdam Figvratiss | Hvngariae Lapidibus, | ... | Avgvst Ioh. Hvgo, | ... | Wolffenbvtellae, 1729. 4^o:)(4, one folding plate (fossil shells).

XII. De | Gigantvm | Dentibus, | ... | I.H. Mevschen, | ... | Wolffenbvtellae, 1729. 4^o:)(4, one

plate (tooth). [Text dated 1 September 1729].

XIII. De | Lapidibus | Odoratis, | ... | Andrea. El. Buchnervm, | ... | Wolffenbvtellae, 1729. 4^o:)(4. [Text dated 1 October 1729].

XIV. De | Remediis Qvibvsdam | Odontalgicis, | ... | Christoph. Jac. Trew, | ... | Wolffenbvtellae, 1729. 4^o: A4. [Text dated 1 November 1729].

XV. De | Farina Fossili | ... | Joh. Heinr. Linck, | ... | Wolffenbvtellae, 1729. 4^o:)(4. [Text dated 1 December 1729].

XVI. De | Sanctis Medicis, | ... | Joh. Bernh. Hassel, | ... | Wolffenbvtellae, 1730. 4^o:)(4, one plate ("XVI," St. Liborius). [Text dated 2 January 1730].

XVII. De | Sanctis Medicis | Et | Oleo Sanctae | Waldburgae | ... | Joh. Bernh. Hassel, | ... | Wolffenbvtellae, 1730. 4^o:)(4, one plate ("XVII," St. Waldburga). [Text dated 1 February 1730].

XVIII. De | Sactis Medicis | Et | Oleo | Sanctinicolai | ... | Joh. Bernh. Hassel, | ... | Wolffenbvtellae, 1730. 4^o:)(4; 4^l.; [1]-8. [Text dated 1 March 1730].

XIX. Sistens | Memorabilia | Qvedlinburgensia | ... | Fridr. Christianvm | Lesser, | ... | Wolffenbvtellae, 1730. 4^o:)(4, 2 plates (Vase & shield). [Text dated 4 April 1730].

XX. De | Tvberibvx Terræ | ... | Herm. Frid. Teichmeyer, | ... | Wolffenbvtellae, 1730. 4^o:)(4; 4^l.; [1]-8 p., 2 plates (Stones & roots and nuts). [Text dated 1 May 1730].

XXI. De | Medicis Viennensibus | Anno MDC-CXXIII. MDCCXXIV. MDCCXXV. | Eorvmque | Scriptis Medicis | ... | Christ. Georg. Schwalbe, | ... | Wolffenbvtellae, 1730. 4^o:)(4. [Text dated 1 June 1730].

XXII. De | Medicis Viennensibus | Anno MDC-CXXIII. MDCCXXIV. MDCCXXV. | Eorvmque | Scriptis Medicis | Et | Medicina | ... | Christ. Georg. Schwalbe, | ... | Wolffenbvtellae, 1730. 4^o:)(4; 4^l.; [1]-8 p. [Text dated 1 July 1730].

XXIII. De | Alga Saccharifera, | Polypomarina | Petrifacto, | ... | J.H. Mevschen, | ... | Wolffenbvtellae, 1730. 4^o:)(4; 4^l.; [1]-8 p., 2 plates (Trilobites & plants and insects). [Text dated 1 August 1730].

XXIV. De | Marmore | Variorvm Locorvm, | ... | Albertvm Ritter, | ... | Wolffenbvtellae, 1730. 4^o:)(4; [1]-8 p., 1 plate (Fossil plants). [Text dated 1 September 1730].

XXV. De | Marmore | Variorvm Locorvm, | in Specie | Florentino, | ... | Albertvm Ritter, | ... | Wolffenbvtellae, 1734. 4^o: A4 B4; 8^l.; [1]-16 p., 2 plates (Fossils and ornamental marble & sandstone scene [folding]). [Text dated 1 November 1734].

XXVI. De | Marmore | Variorvm Locorvm, | ... | Albertvm Ritter, | ... | Wolffenbvtellae, 1733. 4^o: A4 B2; [1]-12 p. [Text dated 1 December 1733].

XXVII. Sistens | Historiam Natvralem | Lapidis | Serpentinis Magnetici | ... | Pavl. Gott. Werlhof, | ... | Wolffenbvtellae, 1733. 4^o: A-D4, 2 plates (Concretions & cobra). [Text dated 1 October 1733].

XXVIII. De | Lapide Hystricino | Malacano | ... | Pavl. Gottl. Werlhofvm, | ... | Wolffenbvtellae, 1734. 4^o: A-C4 D2; 14^l.; [1]-28 p., one plate (Baskets). [Text is dated 20 January 1734].

XXIX. De | Glossopetris | Et | Chelidoniis | ... | Henr. Joh. Bytemeister, | ... | Wolffenbvtellae, 1734. 4^o: A-B4; 8^l.; [1]-16 p., one plate (Shark's teeth). [Text dated 1 June 1734].

XXX. Sistens | Memorabilia | Erfvrtensia | ... | Frid. Christian. Lesser, | ... | Wolffenbvtellae, 1734. 4^o: p8; 8^l.; [1]-16 p. [Text dated 10 April 1734].

XXXI. De | Lapide Gamaicv Sev | Variolaceo | ... | Joh. Samvel Grapivm, | ... | Wolffenbvtellae, 1734. 4^o: A4 B2; 6^l.; [1]-11, [1] blank p., one plate (Stones). [Text dated 1 August 1734].

XXXII. Sistens | Memorabilia | Mvsei Ritteriani | ... | J.H. Mevschen, | ... | Wolffenbvtellae, 1734. 4^o:

- A-B⁴; 8ℓ.; [1]-16 p., 2 plates (fossils). [Text dated 1 June 1734].
- XXXIV. De | Antro | Scharzfeldiano | et | Ibergensis | ... | Avgvstvm Joh. Hvgo, | ... | Wolffenbvttelae, 1734. 4°: A-B⁴; 8ℓ.; no pagination; one map. [Text dated 3 February 1734].
- XXXV. Sistens, | Memorabilia | Semproniensia, | ... | Henr. Jacobvm Sivers, | ... | Wolffenbvttelae, 1734. 4°: A⁴ B²; 6ℓ.; [1]-12 p. [Text dated 1734].
- XXXVI. Sistens, | Memorabilia | Semproniensia, | ... | Henr. Jacobvm Sivers, | ... | Wolffenbvttelae, 1734. 4°: A⁴ B²; 6ℓ.; [1]-12 p., one plate (Leaves). [Text dated 1734].
- XXXVII. De | Fossilibus | Blankenbur- | gicis | ... | Joh. Sebast. Albrecht, | ... | Wolffenbvttelae, 1735. 4°: A⁴ B²; 6ℓ.; [1]-12 p., one plate (fossils). [Text dated August 1735].
- XXXVIII. De | Cerevisia | Goslariensi | ... | J.D. Kohl, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴; 8ℓ.; no pagination. [Text dated August 1735].
- XXXIX. Sistens | Mvseum Metall- | cum Autoris | ... | Johann. Henr. Hampe, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴ C²; 10ℓ.; no pagination; one plate (fossils). [Text dated September 1735].
- XL. Mvsevm Metallicvm | Avtoris | Sistens, | ... | Ioh. Henric. | Hampe, | ... | Wolffenbvttelae, 1735. 4°: a-b⁴; 8ℓ.; no pagination; one plate (fossils). [Text dated 19 September 1735].
- XLI. Sistens | Mineras Martis | Mvsei Metallici | Avtoris | ... | Ioh. Henric. | Hampe, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴ C²; 10ℓ.; no pagination; 2 plates (concretions & minerals and stalactite). [Text dated September 1735].
- XLII. Sistens | Mineras Jovis, | Satvrniet Cinci | Mvsei Metallici Avtoris | ... | Ioh. Henric. Hampe, | ... | Wolffenbvttelae, 1736. 4°:):(⁴):(2); 6ℓ.; no pagination; one plate (minerals). [Text dated January 1736].
- XLIII. Sistens | Mineras Mercvrii, | Antimonii, & c. | Mvsei Metallici Avtoris | ... | Ioh. Henric. Hampe, | ... | Wolffenbvttelae, 1736. 4°: A-B⁴; 8ℓ.; no pagination; 2 plates (fossils). [Text dated January 1736].
- XLIV. Exhibens | Mineras Cobalti, | Magnesiae, Lap. | Calaminaris | etc. | Musei Metallici Avtoris | ... | Johann. Henr. Hampe, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴; 8ℓ.; no pagination. [Text dated September 1735].
- XLV. Sistens | Concretasalina | et | Sulphurea | Mvsei Metallici Avtoris | ... | Johann. Henr. Hampe, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴; 8ℓ.; no pagination; 2 plates (fossils). [Text dated September 1735].
- XLVI. Sistens, | Recrementa Metallica, | Talcv, Spatvm, | Flvres Et Lvsvs | Minerales | ... | Ioh. Henric. | Hampe, | ... | Wolffenbvttelae, 1736. 4°:):(⁴ 2):(2); 6ℓ.; no pagination; one plate (minerals=calcite). [Text dated 1736].
- XLVII. Exhibens | Lapides Vulgares, | Nempe | Amianthvm, Lap. Scissil. | Glacem Mariæ, | Gypsvm, Lap. Calcar. Etc. | Mvsei Metallici Avtoris | ... | Ioh. Henric. Hampe, | ... | Wolffenbvttelae, 1736. 4°: a⁴ b²; 6ℓ.; no pagination. [Text dated 1736].
- XLVIII. Exhibens | Memorabilia Poso- | niensia | ... | Frid. Christian. Lesser, | ... | Wolffenbvttelae, 1736. 4°: A-B⁴; 8ℓ.; no pagination; one plate (Saint). [Text dated October 1735].
- XLIX. De | Signis Vrbivm | Mnemonicis | ... | Christianvm | Nettelblatt, | ... | Wolffenbvttelae, 1736. 4°: a-c⁴; 12ℓ.; no pagination; one plate (Saint). [Text dated November 1736].
- L. Memorabilia Musei | Lesseriani | Sistens | ... | Henning. Joh. | Siemens, | ... | Wolffenbvttelae, 1735. 4°: A-B⁴; 8ℓ.; [1]-16 p., 2 plates (fossils & dendrites). [Text dated 3 December 1735].
- LI. Sistens | Memorabilia Musei | Lesseriani | ... | Henning. Joh. | Siemens, | ... | Wolffenbvttelae, 1735. 4°:):(⁴ 2):(2); 6ℓ.; no pagination. [Text dated 15 December 1735].
- LII. De | Mvmia | Brvnsvicensivm | ... | I.D. Kohl, | ... | Wolffenbvttelae, 1736. 4°: A-D⁴; 16ℓ.; [1]-32 p., one plate (wagon, man and horse). [Text not dated].
- LIII. De | Signis Vrbivm | Mnemonicis | ... | Christianvm | Nettelblatt, | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴; 8ℓ.; no pagination; 9 plates (religious scenes). [Text dated 4 January 1737].
- LIV. Sistens | Signa Vrbivm | Mnemonica | ... | Christianvm | Nettelblatt, | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴; 8ℓ.; no pagination. [Text dated 15 February 1737].
- LV. Sistens | Reliqua | Vrbivm Et Lo- | corvm | signa Mnemonica | ... | Christianvm | Nettelblatt, | ... | Wolffenbvttelae, 1737. 4°:):(⁴)(²; 6ℓ.; no pagination. [Text dated 1 March 1737].
- LVI. Sistens | Catalogvm | Fossilivm Figvrato- | rvm Gvelperby- | tensivm | ... | Kilianvm Stobævm, | ... | Wolffenbvttelae, 1737. 4°:):(⁴ 2):(2); 6ℓ.; 1-13 (p. 12 misnumbered 13) p., one plate (figured stone). [Text dated April 1737].
- LVII. Sistens | Sciagraphiam | Mvsei Brvckmanniani | ... | Joh. Wilh. Kretschmann, | ... | Wolffenbvttelae, 1737. 4°:):(⁴)(²; 6ℓ.; 1-12 p. [Text dated 9 May 1737].
- LVIII. Sistens | Sciagraphiam | Mvsei Brvckmanniani | ... | Joh. Wilh. | Kretschmannvm, | ... | Wolffenbvttelae, 1737. 4°:):(⁴; 4ℓ.; [1]-8 p. [Text dated 21 May 1737].
- LIX. Sistens | Sciagraphiam | Mvsei Brvckmanniani | In Specie | Istivs Regnvm | Minerale | ... | Joh. Wilh. | Kretschmannvm, | ... | Wolffenbvttelae, 1737. 4°:):(⁴; 4ℓ.; [1]-8 p. [Text dated 1 June 1737].
- LX. Sistens | Sciagraphiam | Mvsei Brvckmanniani | Partem Alteram | De | Artefactis | ... | Joh. Wilh. | Kretschmannvm, | ... | Wolffenbvttelae, 1737. 4°:):(⁴)(²; 6ℓ.; [1]-12 p. [Text dated 13 June 1737].
- LXI. Sistens | Memorabilia | Tyrnaviensia | ... | Frideric. Christianvm | Lesser, | ... | Wolffenbvttelae, 1737. 4°: A⁴ B²; 6ℓ.; [1]-12 p., one plate (insects). [Text dated 21 September 1737].
- LXII. Sistens | Notas Qvasdam | Et | Animadversiones | in | Caspari Bavhini | Prodrumvm | Theatri Botanici | ... | Ioh. Frideric. Gronovium, | ... | Wolffenbvttelae, 1737. 4°: a⁴ b²; 6ℓ.; [1]-12 p. [Text dated 2 October 1737].
- LXIII. Sistens | Notas Qvasdam | Et | Animadversiones | in | Gvil. Pisonis Et Jac. Bontii | Libros | De | Indiae Vtrivsqve | Re Natvrli | Et Medica | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴; 8ℓ.; [1]-15, [1] blank p., 5 plates (fossils). [Text dated 11 December 1737].
- LXIV. De | Lapidibvs Figvratis | Qvibvsdam Rari- | oribvs, | Nondvm Descriptis | et | Delineatis, | Mvsei Avtoris | ... | Dom. Hans Sloane, | ... | Wolffenbvttelae, 1737. 4°: A-D⁴; 16ℓ.; [1]-31, [1] blank p. [Text is not dated].
- LXV. Exhibens | Belemnitas | Mvsei Avtoris | ... | Ioh. Philippvm | Breynium, | ... | Wolffenbvttelae, 1737. 4°: a-c⁴; 12ℓ.; [1]-24 p., 5 plates (fossils). [Text is not dated].
- LXVI. De | Pane | Dæmonvm, Præsidem, | Directores, Adivnctos Atqve Collegas | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴; 8ℓ.; [1]-16 p., one plate (rock?). [Text dated 3 February 1738].
- LXVII. De | Pane Febrifvgo | St. Nicolai | ... | Philip. Lvdivic. | Dreissigmarck | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴; 8ℓ.; [1]-16 p., 2 plates (religious scenes). [Text dated 24 February 1738].
- LXVIII. Sistens | Memorabilia | Neobvrgica | et | Panem Fvstibvs | Verberandvm | ... | Conradvm Iken | ... | Wolffenbvttelae, 1737. 4°:):(⁴; 4ℓ.; [1]-8 p., one plate (Saint). [Text dated 19 April 1738].
- LXIX. Sistens | Gazophylacivm | Lapidvm Pre- | tiosorvm | Silesiacorvm | D. Ioh. Christ. Stettinsky, Mag. Henric. Iacob. | Sivers | ... | Wolffenbvttelae, 1737. 4°:):(²)(⁴ 3):(2); 10ℓ.; [1]-20 p. [Text dated 11 April 1738].

- LXX. De | Pane | Dactylorvm, | St. Marci, | Nec Non | ex | Marga Candida | ... | Daniel Fischervm | ... | Wolfenbvttelae, 1737. 4^o:)(4; 4*ℓ*.; 1-8 p., one plate (stones). [Text dated 1 May 1738].
- LXXI. Sistens | Chamacerasvm | Hungaricvm | Et | Salicem | Orientalem Davidis | ... | Georgivm Clifford | ... | Wolfenbvttelae, 1738. 4^o:)(4)(2; 6*ℓ*.; 1-12 p., one plate (plants). [Text dated 3 June 1738].
- LXXII. De | Sylvæ Hercynicæ | Antris | Die Alte= und Neue=Kelle, | Nec Non | Die Hölle | Vocatis | ... | Hermannvm Mvnter | ... | Wolfenbvttelae, 1738. 4^o:)(4)(2; 6*ℓ*.; 1-12 p., one map. [Text dated 14 June 1738].
- LXXIII. Sistens | Memorabilia | Montis Regii | in | Hungaria | ... | Joh. Jac. de Lüdecke | ... | Wolfenbvttelae, 1738. 4^o:)(4; 4*ℓ*.; 1-8 p., one plate (seed pods). [Text dated 27 October 1738].
- LXXIV. Sistens | Memorabilia | Schemnicensia | in | Hvgaria | ... | Joh. Jac. de Lüdecke | ... | Wolfenbvttelae, 1738. 4^o:)(4)(2; 6*ℓ*.; 1-12 p., one plate (fossils). [Text dated 12 December 1738].
- LXXV. Sistens | Memorabilia | Cremnicensia | in | Hvgaria | ... | Joh. Jac. de Lüdecke | ... | Wolfenbvttelae, 1738. 4^o: A8; 8*ℓ*.; 1-16 p. [Text dated 16 December 1738].
- LXXVI. Sistens | Memorabilia | Neosoliensia | in | Hvgaria | ... | Joh. Jac. de Lüdecke | ... | Wolfenbvttelae, 1738. 4^o:)(4)(2; 6*ℓ*.; 1-12 p. [Text dated 19 December 1738].
- LXXVII. Sistens | Antra | Draconvm | Liptoviensia | ... | Carolvm Nicol. Langivm | ... | Wolfenbvttelae, 1739. 4^o: a-b⁴; 8*ℓ*.; [1]-16 p., one plate (bones and teeth). [Text dated 4 January 1739].
- LXXVIII. De | Cervovolante | Et | Ejvs | Hibernaculo | ... | Ioh. Christoph. Lischwiz | ... | Wolfenbvttelae, 1739. 4^o: A⁴ B²; 6*ℓ*.; 1-12 p., one plate (insects). [Text dated 7 January 1739].
- LXXIX. De | Signis | Vrbivm | Mnemonicis | ... | Christian. Nettleblatt | ... | Wolfenbvttelae, 1739. 4^o:)(4)(2; 6*ℓ*.; 1-12 p. [Text dated 9 January 1739].
- LXXX. De | Signis | Vrbivm | Mnemonicis | ... | Christian. Nettleblatt | ... | Wolfenbvttelae, 1739. 4^o:)(4)(2; 6*ℓ*.; 1-12 p. [Text dated 14 January 1739].
- LXXXI. Mvsevm | Metallicvm | Avtoris | Sistens | ... | Ioh. Henric. Hampe | ... | Wolfenbvttelae, 1739. 4^o: a-b⁴; 8*ℓ*.; 1-16 p. [Text dated 29 January 1739].
- LXXXII. Mvsevm | Metallicvm | Avtoris | Sistens | ... | Ioh. Henric. Hampe | ... | Wolfenbvttelae, 1739. 4^o:)(-2)(4; 8*ℓ*.; 1-16 p., one plate (fossils). [Text dated 30 January 1739].
- LXXXIII. Mvsevm | Metallicvm | Avtoris | Exhibens | ... | Ioh. Henric. Hampe | ... | Wolfenbvttelae, 1739. 4^o:)(4)(2; 6*ℓ*.; 1-12 p., one plate (minerals). [Text dated 31 January 1739].
- LXXXIV. Sistens | Mvsevm | Metallicvm | Avtoris | ... | Ioh. Henric. Hampe | ... | Wolfenbvttelae, 1739. 4^o: a-c⁴ d²; 14*ℓ*.; 1-28 p., 2 plates (minerals and fossils). [Text dated 3 February 1739].
- LXXXV. Sistens | Plantas | Quasdam | Hercynicæ Sylvæ | ... | ALbertum Haller | ... | Wolfenbvttelae, 1740. 4^o: a-b⁴; 8*ℓ*.; 1-15, [1] p., one plate (corals). [Text dated 5 January 1740].
- LXXXVI. Sistens | Corollarium | Ad | Relationem Historico- | Curiosam | De | Iterato Itinere | ... | ALbertum Ritter | ... | Wolfenbvttelae, 1740. 4^o: a-b⁴; 8*ℓ*.; 1-16 p., 9 plates (scenes and one of fossil corals).
- LXXXVII. Sistens | Memorabilia | Comitatus Liptoviensis, | In | Hungaria | ... | Dom. Paul. Henr. Gerh. | Moehringium | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-7, [1] p. [Text dated 5 February 1740].
- LXXXVIII. Sistens | Memorabilia | Kesmarkina, | in | Hungaria | ... | And. Eliam Büchner | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-8 p. [Text dated 13 February 1740].
- LXXXIX. Sistens | Montes | Carpatios | In | Hungaria | ... | Hans Sloane | ... | Wolfenbvttelae, 1740. 4^o: a-c⁴ d²; 14*ℓ*.; 1-27, [1] p., one plates (pine tree and pine cones). [Text dated 19 February 1740].
- XC. Sistens | Memorabilia | Leutschoviensia | et | Dobschinensia | ... | Petr. Christ. Wagnerum | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-8 p. [Text dated 3 March 1740].
- XCI. Sistens | Memorabilia | Szomolnokænsia | ... | Peterum Keck | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-8 p. [Text dated 5 March 1740].
- XCII. Sistens | Memorabilia | Epericensia | ... | Phil. Lud. Brückmannvm | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-8 p., one plate (insects). [Text dated 26 March 1740].
- XCIII. Sistens | Salis-Fodinas | Soow Arienses | ... | Christoph. Jacob. Trew | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-7, [1] p. [Text dated 28 March 1740].
- XCIV. Sistens | Memorabilia | St. Ivan | ... | Laurentium Heisterum | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-7, [1] p. [Text dated 31 March 1740].
- XCV. De | Incendio | Restingvendo | ... | Paul. Theophil. Werlhof | ... | Wolfenbvttelae, 1740. 4^o:)(4; 4*ℓ*.; 1-8 p. [Text dated 3 April 1740].
- XCVI. Sistens | Memorabilia | Trincinsia | ... | Otto. Ioach. Anhalt | ... | Wolfenbvttelae, 1740. 4^o: a⁴ b²; 6*ℓ*.; 1-12 p., 2 plates (Saints). [Text dated 11 April 1740].
- XCVII. Sistens | Vina | Hungarica | ... | Ioh. God. Büchnerum | ... | Wolfenbvttelae, 1740. 4^o: a⁴ b²; 6*ℓ*.; 1-12 p. [Text dated 13 April 1740].
- XCVIII. Sistens | Pannoniae | Aquas Minerales | ... | Petrum Keck | ... | Wolfenbvttelae, 1740. 4^o: a⁴ b²; 6*ℓ*.; 1-12 p. [Text dated 16 April 1740].
- XCIX. Sistens | Memorabilia | Hungarica | ... | August. Iohan. Hugo | ... | Wolfenbvttelae, 1740. 4^o: a-d⁴; 16*ℓ*.; 1-32 p., 2 plates (Rhino's horn and siamese twins). [Text dated 20 May 1740].
- C. Sistens | Scriptores | Rerum | Hungaricum | ... | Matthiam Belium | ... | Wolfenbvttelae, 1740. 4^o: a-b⁴; 8*ℓ*.; 1-15, [1] p.

[Volume 2]

- I. De | Mvscis | Nondvm Descriptis | ... | Joh. Jac. Dillenivm | ... | Wolfenbvttelae, 1744. 4^o: [1]-6 p., 2 plates (roots?). [Text dated 3 January 1744].
- II. Sistens | ΚΩ ΝΟΚΑΡΙΘΑΕΝΑΡΟΝ | Gerhardvm Henricvm | Carstens | ... | Wolfenbvttelae, 1744. 4^o: [7]-10 p., one plate (pine cones). [Text dated 11 February 1744].
- III. De | Nido Linariæ Avis | ... | Samvel. Theophil. | Langivm | ... | Wolfenbvttelae, 1744. 4^o: [11]-16, 2 plates on one leaf (birds). [Text dated 13 February 1744].
- IV. De Halcyone | ... | Otto. Joachimvm | Anhalt | ... | Wolfenbvttelae, 1744. 4^o: [17]-24 p. [Text dated 14 February 1744].
- V. De | Nidis Avivm | Petrifactis | ... | Christian. Gottlieb | Lvdwig | ... | Wolfenbvttelae, 1744. 4^o: [25]-28 p., plates VII-VIII (rocks). [Text dated 24 March 1744].
- VI. Sistens | Notas et Animadversiones | in | Ioh. Raii | Methodvm Plantarvm Elem- | datam et Avcam | ... | Carolvm Linnævm | ... | Wolfenbvttelae, 1744. 4^o: [29]-42 p. [Text dated 2 May 1744].
- VII. De | Limacibvs | ... | Iohan. Christian. | Kvndmann | ... | Wolfenbvttelae, 1744. 4^o: [43]-50 p. [Text dated 5 May 1744].
- VIII. Sistens | Additamentvm | Ad | Historiam Natvralem | Lapidis Nvmmalis | Transylvaniæ | ... | Tob. Conradvm Hoppe | ... | Wolfenbvttelae, 1744. 4^o: [51]-62 p. [Text dated 6 May 1744].
- IX. Sistens | Observationes | de | Araneis, | Et | Præcipve Horvm Ocvlis | ... | Gerhardvm Henricvm Carstens | ... | Wolfenbvttelae, 1744. 4^o: [51]-62 p. [Text dated 6 May 1744].

- X. Sistens | Memorabilia | Hanoverana | ... | Emanuel. Gottlieb. | Harrer | ... | Wolfenbvtellae, 1744. 4°: [71]-79 p., plates IX-XI (corals). [Text dated 15 May 1744].
- XI. Sistens | Memorabilia | Hildesiensia | ... | B.F.M. Langvum | ... | Wolfenbvtellae, 1744. 4°: [80]-93 p. [Text dated 6 June 1744].
- XII. Sistens | Rariora Mvsei | Dom. | Ott. Joach. Anhalt | ... | Iohann. Frideric. | Gronovium | ... | Wolfenbvtellae, 1744. 4°: 94-102 p. [Text dated 7 June 1744].
- XIII. De | Lapidibus | Odoratis | ... | Iohann. Frideric. Koenig | ... | Wolfenbvtellae, 1744. 4°: [103]-112 p. [Text dated 10 June 1744].
- XIV. De | Magno | Christophoro | ... | Alberum Ritter | ... | Wolfenbvtellae, 1744. 4°: [113]-127 p. [Text dated 11 June 1744].
- XV. Sistens | Observations | De | Insectis | ... | G.H. Carstens | ... | Wolfenbvtellae, 1744. 4°: [128]-136 p. [Text dated 12 June 1744].
- XVI. Sistens | Serpentes | Et | Viperas Sylvae | Hercynicae | ... | G.H. Carstens | ... | Wolfenbvtellae, 1744. 4°: [137]-142 p. [Text dated 15 June 1744].
- XVII. Sistens | Aves | Sylvae | Hercynicae | ... | Joh. Henr. Zorn | ... | Wolfenbvtellae, 1744. 4°: [143]-162 p., one plate (no. XII, alphabet). [Text dated 16 June 1744].
- XVIII. Sistens | Aves | In | Germania | Obvias | ... | Joh. Henr. Zorn | ... | Wolfenbvtellae, 1744. 4°: [163]-174 p. [Text dated 17 June 1744].
- XIX. Exhibens | Mvrem | Persicum | ... | Petrum Christian. | Wagnervm | ... | Wolfenbvtellae, 1744. 4°: [175]-178 p.
- XX. Sistens | Mvseum | Metallicum | Avtoris | ... | Iohann. Albert. Gesnervm | ... | Wolfenbvtellae, 1744. 4°: [179]-189 p. [Text dated 20 June 1744].
- XXI. Sistens | Mvseum | Metallicum | Avtoris | ... | Iohann. Albert. Gesnervm | ... | Wolfenbvtellae, 1744. 4°: [190]-199 p. [Text dated 21 June 1744].
- XXII. Sistens | Reliquias | V.T. | Ivstvm Mart. Glæsener | ... | Wolfenbvtellae, 1744. 4°: [200]-207 p. [Text dated 23 June 1744].
- XXIII. De | Vrnis | Goslariensibus | ... | Johann. Sebast. Albrecht | ... | Wolfenbvtellae, 1744. 4°: [208]-218 p., one plate (Greek text).
- XXIV. Sistens | Memorabilia | Goslariensia | ... | Frid. Christian. | Lesser | ... | Wolfenbvtellae, 1744. 4°: [219]-232 p. [Text dated 28 June 1744].
- XXV. De | Marmore | Variorum | Locorum | ... | Albertum Ritter | ... | Wolfenbvtellae, 1744. 4°: [233]-240 p. [Text dated 2 July 1744].
- XXVI. De | Marmore | Variorum Locorum | ... | Albertum Ritter | ... | Wolfenbvtellae, 1745. 4°: [241]-262 p., one folding plate (no. XIV, sandstone slice). [Text dated 11 June 1745].
- XXVII. Sistens | Reliquias V.T. | ... | Ivst. Martin. Glæsener | ... | Wolfenbvtellae, 1745. 4°: [263]-279 p., one plate (no. XV, scissors). [Text dated 14 June 1745].
- XXVIII. Sistens | Reliquias | D. Mariae | et | Eivis Familæ | ... | Jodocum Leopoldum | Frisch | ... | Wolfenbvtellae, 1745. 4°: [280]-302 p., 2 plates (nos. XVI, combs and XIX, angels). [Text dated 15 June 1745].
- XXIX. Sistens | Memorabilia | Osterodana | ... | Bvrckardum Dav. | Mavchartum | ... | Wolfenbvtellae, 1745. 4°: [303]-318 p. [Text dated 16 June 1745].
- XXX. Sistens | Memorabilia | Hercynica | ... | Johann. Benjamin | De Fischer | ... | Wolfenbvtellae, 1745. 4°: [319]-336 p. [Text dated 18 June 1745].
- XXXI. Sistens | Memorabilia | Ilfeldensia | ... | Io. Car. Wilh. Moehsen | ... | Wolfenbvtellae, 1745. 4°: [337]-344 p., 2 plates (nos. XXII, dendrites and XXIII, tools).
- XXXII. Exhibens | Experimenta | Qv Ædam | Cvriosa | ... | Joh. Lvc. Woltersdoff | ... | Wolfenbvtellae, 1745. 4°: [345]-352 p. [Text dated 21 June 1745].
- XXXIII. Sistens | Memorabilia | Northvsana | ... | Ioh. Christ. | Effenberger | ... | Wolfenbvtellae, 1745. 4°: [353]-357 p. [Text dated 22 June 1745].
- XXXIV. Sistens | Memorabilia | Walckenredensia | ... | Balthas. Ehrhartum | ... | Wolfenbvtellae, 1745. 4°: [358]-365 p. [Text dated 12 June 1745].
- XXXV. Sistens | Memorabilia | Vallis Divæ | Mariae | ... | Ioh. And. Harnisch | ... | Wolfenbvtellae, 1745. 4°: [366]-384 p., one folding plate (text).
- XXXVI. Sistens | Agaricum | Anthropomorphum | ... | Gerh. Henr. Carstens | ... | Wolfenbvtellae, 1745. 4°: [385]-387 p., one plate (no. XXIV, doll).
- XXXVII. Sistens | Lapides | Qvosdam | Figvratos | ... | Ioh. Iacobo Spada | ... | Wolfenbvtellae, 1745. 4°: [388]-391 p. [Text dated 2 September 1745].
- XXXVIII. Sistens | Typum | Metallifodinae | ex | Mvseo | Schmidiano | ... | Jo. Henr. Schütte | ... | Wolfenbvtellae, 1745. 4°: [392]-400 p., one folding plate (seals).
- XXXIX. Sistens | Modulum | Metallifodinae | Perpulchrum | ... | Ioh. Henr. Schütte | ... | Wolfenbvtellae, 1745. 4°: [401]-409 p. [Text dated 6 September 1745].
- XL. Proponens | Memorabilia | Mvsei | Schmidiani | ... | Tob. Conr. Hoppe | ... | Wolfenbvtellae, 1745. 4°: [410]-418 p. [Text dated 9 September 1745].
- XLI. Sistens | Memorabilia | Helmstadiensia | ... | Christ. Stephan. Schefflivm | ... | Wolfenbvtellae, 1745. 4°: [419]-429 p. [Text dated 11 September 1745].
- XLII. Exhibens | Mvseum | Metallicum | Avtoris | ... | Jo. Albrecht Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [430]-441 p. [Text dated 14 September 1745].
- XLIII. Sistens | Mineras | Argenti | Mvsei Avtoris | ... | Jo. Albrecht. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [442]-456 p. [Text dated 24 September 1745].
- XLIV. Offerens | Mineras | Cvpru Mvsei | Avtoris | ... | Joh. Albert. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [457]-482 p. [Text dated 30 September 1745].
- XLV. Sistens | Lapides | Ferreos Mvsei | Avtoris | ... | Jo. Albert. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [483]-501 p. [Text dated 5 October 1745].
- XLVI. Sistens | Mineras | Jovis | ... | Jo. Albert. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [502]-509 p. [Text dated 8 October 1745].
- XLVII. Sistens | Mineras | Satvrni | ... | Jo. Albert. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [510]-516 p. [Text dated 13 October 1745].
- XLVIII. Sistens | Mvsei | Brückmanniani | Mineas | Marcasitæ, Mervcrii | ... | Jo. Albert. Gesnervm | ... | Wolfenbvtellae, 1745. 4°: [517]-523 p. [Text dated 14 October 1745].
- XLIX. Sistens | Thesaurum | Rerm Natvralivm | Comitiss Iohannæ Sophiæ | ... | Ott. Ioach. Anhalt | ... | Wolfenbvtellae, 1745. 4°: [524]-532 p. [Text dated 14 October 1745].
- L. Sistens | Regulum Cristatum | Sylvae | Hercynice | ... | Joh. Henric. Zornium | ... | Wolfenbvtellae, 1745. 4°: [533]-541, [542 blank] p., one plate (no. XXVI, bird).
- LI. Sistens | Marcasitas | Mvsei Avtoris | ... | Io. Albert. Gesnervm | ... | Wolfenbvtellae, 1747. 4°: [543]-553 p., 2 plates (nos. XXVII, mineral specimens and XXX, various shapes). [Text dated 7 January 1747].
- LII. Sistens | Mvsei Metallici | Brückmanniani | Mineras | Pyriticosas | ... | Io. Albert. Gesnervm | ... | Wolfenbvtellae, 1747. 4°: [554]-558 p. [Text dated 8 January 1747].
- LIII. Sistens | Cobalta | Mvsei Avtoris | ... | Io. Albert. Gesnervm | ... | Wolfenbvtellae, 1747. 4°: [559]-571 p. [Text dated 19 January 1747].
- LIV. Sistens | Mvsei Brückmanniani | Magnesias | Lapides Cala- | minares, Minerassylve- | stres, Pseudogalenas &c. | ... | Io. Albert. Gesnervm | ... | Wolfenbvtellae, 1747. 4°: [572]-583 p. [Text dated 1 February 1747].

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 LV. Offerens | Mvsei Metallici | Salia | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [584]-598 p. [Text dated 3 February 1747].
 LVI. Offerens | Mvsei Avtoris | Concreta | Svlphvrea | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [599]-617 p. [Text dated 17 February 1747].
 LVII. Sistens | Mvsei Brückmanniani | Lapides | Talcosos, Spa- | ticos, Qvarzosos, | Flvres, &c. | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [618]-629 p. [Text dated 27 February 1747].
 LVIII. Sistens | Mvsei Metallici | Ingemnationes, Vvlgio | Drusen | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [630]-634 p. [Text dated 3 March 1747].
 LIX. Sistens | Mvsei Metallici | Asbestvm. | Acc. | Io. Ciampini, Romani, | Diss. Epist. | De | Incombustibili Lino | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [635]-654 p., one plate (no. XXIX, furniture). [Text dated 7 April 1747].
 LX. Sistens | Mvsei Avtoris | Alvmia | Plvmosa, Scissilia, Arde- | sias, Lap. Specv- | lares, &c. | ... | Io. Albert. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [655]-666 p. [Text dated 8 April 1747].
 LXI. De | Ave | Icognita | ... | Ioh. Henric. Zorn | ... | Wolffenbvttelae, 1745. 4^o: [667]-672 p., one plate (no. XVIII, bird). [Text dated 11 April 1747].
 LXII. Exhibens | Plantas | Melitenses | ... | Carolvm Linnævm | ... | Wolffenbvttelae, 1747. 4^o: [673]-691 p. [Text dated 3 May 1747].
 LXIII. Sistens | Iter Hal- | berstadiense | ... | Sam. Gvil. Oetter | ... | Wolffenbvttelae, 1747. 4^o: [692]-701 p. [Text dated 4 May 1747].
 LXIV. Sistens | Concho- | thecam | Rätzelianam | ... | Frid. Lorentz von Jem- | gymer Closter | ... | Wolffenbvttelae, 1745. 4^o: [702]-723 p. [Text dated 17 May 1747].
 LXV. Sistens | Iter | Magdebvrgense | ... | Christ. Andream | Cothenivm | ... | Wolffenbvttelae, 1747. 4^o: [724]-736 p. [Text dated 18 May 1747].
 LXVI. Sistens | Mvsei | Oloffianvm | ... | Frid. Lavrent. De Jem- | gymer Closter | ... | Wolffenbvttelae, 1747. 4^o: [737]-750 p. [Text dated 23 May 1747].
 LXVII. Sistens | Iter | Bran- | denbvrgense | ... | Christ. Gottlob. Grvndig | ... | Wolffenbvttelae, 1747. 4^o: [751]-755 p., one plate (no. XXXI, Goddess?). [Text dated 24 May 1747].
 LXVIII. Sistens | Memorabilia | Berolinensia | ... | Iohan. Gesnervm | ... | Wolffenbvttelae, 1747. 4^o: [756]-864 p. [Text dated 1 June 1747].
 LXIX. Sistens | Bibliothe- | cam Regiam | Berolinensem | ... | Joh. Sam. Nobil. | Dom. De Berger | ... | Wolffenbvttelae, 1747. 4^o: [865]-872 p. [Text dated 2 June 1747].
 LXX. Sistens | Cimelio- | thecam, Mvs. | Antiquitativm, | Nec Non | Nvmmo;phy- | liacivm Regivm | Berolinense | ... | Jo. Franc. Seqvierivm | ... | Wolffenbvttelae, 1747. 4^o: [873]-891 p., one plate (no. XXXII, drum). [Text dated 11 June 1747].
 LXXI. Sistens | Iter Fran- | cofvrtanvm | ... | Phil. Lvd. Brückmannvm | ... | Wolffenbvttelae, 1747. 4^o: [892]-900 p., one plate (no. XXXIII, fossils). [Text dated 12 June 1747].
 LXXII. De | Natvrali- | bvs Vekero- | Marchicis | ... | Avgvst. Joh. De Hvgo | ... | Wolffenbvttelae, 1747. 4^o: [901]-910 p. [Text dated 13 June 1747].
 LXXIII. De | Lapide | Serpentino | Halensi | ... | Pavl. Gottlieb. | Werlhof | ... | Wolffenbvttelae, 1747. 4^o: [911]-915 p., one plate (no. XXXIV, concretions). [Text dated 14 June 1747].
 LXXIV. De | Gryphi Vn- | gve, A Dvce | Henrico Leone | Ex Terra Sancta | Brvnsvigam Allato | ... | Joh. Lvd. Alefeld | ... | Wolffenbvttelae, 1747. 4^o: [916]-924 p., one plate (no. XXXV, horn). [Text dated 15 June 1747].
 LXXV. Sistens | Notas et Anim- | adversiones, | in | D. Engelb. Kämpferi | Amoenitativm | Exoticarvm | ... | Henric. Frid. Delivm | ... | Wolffenbvttelae, 1747. 4^o: [925]-936 p. [Text dated 21 June 1747].
 LXXVI. Sistens | Memorabilia | Mansfeldensia | ... | Ioh. Albert. Gesnervm | ... | Wolffenbvttelae, 1748. 4^o: [937]-980 p. [Text dated 5 January 1748].
 LXXVII. Sistens | Memorabilia | Islebiensia | ... | Otton. Ioach. Anhalt | ... | Wolffenbvttelae, 1748. 4^o: [981]-992 p., one plate (no. XXXVI, coral). [Text dated 9 January 1748].
 LXXVIII. Sistens | Memorabilia | Halensia | ... | Ioh. Daniel Denso | ... | Wolffenbvttelae, 1748. 4^o: [993]-1009 p., one plate (no. XXXVII, plan). [Text dated 3 February 1748].
 LXXIX. Sistens | Mvsevm | Orphanotrophii | Halensis | ... | Ioh. Iacob. Rittervm | ... | Wolffenbvttelae, 1748. 4^o: [1110]-1025 p. [Text dated 1 February 1748].
 LXXX. Sistens | Notas | et | Animadversiones | in | D. Christ. Knavt | Compendivm Botanicvm | Sive | Methodvm Plantarvm Genvinam | ... | Carolvm Linnævm | ... | Wolffenbvttelae, 1748. 4^o: [1026]-1044 p. [Text dated 12 February 1748].
 LXXXI. Memorabilia | Gibickensteinensia | Offerens | ... | Christian. Frid. Wilkens | ... | Wolffenbvttelae, 1748. 4^o: [1045]-1048 p., one plate (no. XXXVIII, personage). [Text dated 15 February 1748].
 LXXXII. Exhibens | Memorabilia | Mersebvgica | ... | Carolvm Avgvstvm | A Bergen | ... | Wolffenbvttelae, 1748. 4^o: [1049]-1072 p. [Text dated 1 March 1748].
 LXXXIII. Sistens | Iter | Qverfvrtense | ... | Casmir. Christophor. | Schmidelivm | ... | Wolffenbvttelae, 1748. 4^o: [1073]-1090 p., one plate (no. XXXIX, fossils). [Text dated 3 May 1748].
 LXXXIV. Sistens | Memorabilia | Ienensia | ... | Emanvel. Gottlieb. Harper | ... | Wolffenbvttelae, 1748. 4^o: [1091]-1104 p. [Text dated 4 May 1748].
 LXXXV. Sistens | Notas | Et | Observationes | in | Henr. Bernh. Rvppii | Floram Ienensem | ... | Ioh. Sebast. Albrecht | ... | Wolffenbvttelae, 1748. 4^o: [1105]-1112 p. [Text dated 5 May 1748].
 LXXXVI. De | Badiaga | ... | Abrahamvm Vaternvm | ... | Wolffenbvttelae, 1748. 4^o: [1113]-1117 p. [Text dated 11 May 1748].
 LXXXVII. Sistens | Memorabilia | Vinariensia | ... | Gerhardvm Heinricvm | Carstens | ... | Wolffenbvttelae, 1748. 4^o: [1118]-1123 p. [Text dated 13 June 1748].
 LXXXVIII. Sistens | Mvsevm | Dresense | ... | Fridericvm Lavrent | ... | Wolffenbvttelae, 1748. 4^o: [1124]-1136 p. [Text dated 14 June 1748].
 LXXXIX. Sistens | Memorabilia | Gothana | ... | Wilhelm. Bernard. | Nebel | ... | Wolffenbvttelae, 1748. 4^o: [1137]-1145 p., one plate (no. XL, vases). [Text dated 1 July 1748].
 XC. Sistens | Spicilegivm | Reliquiarvm V.T. | ... | Io. Lvc. Woltersdorff | ... | Wolffenbvttelae, 1748. 4^o: [1146]-1158 p., one plate (no. XLI, throne). [Text dated 2 July 1748].
 XCI. Sistens | Spicilegivm | Altervm | Reliquiarvm V.T. | ... | Io. Lvc. Woltersdorff | ... | Wolffenbvttelae, 1748. 4^o: [1159]-1167 p. [Text dated 14 June 1748].
 XCII. Sistens | Spicilegivm | Reliquiarvmd. Mariae | Et | Eivs Familae | ... | Io. Lvc. Woltersdorff | ... | Wolffenbvttelae, 1748. 4^o: [1168]-1178 p. [Text dated 9 July 1748].
 XCIII. Sistens | Mvsei | Avtoris | Regni Mineralis | Terras | et | Harvm Divisiones | ... | Christ. Gottlieb Lvdwig | ... | Wolffenbvttelae, 1748. 4^o: [1179]-1187 p. [Text dated 10 July 1748].
 XCIV. De | Argillis | Mvsei | Brückmanniani | ... | Christ. Gottl. Ludwig | ... | Wolffenbvttelae, 1748. 4^o: [1188]-1202 p. [Text dated 13 July 1748].
 XCV. De | Bolis | Mvsei Avtoris | ... | Christ.

Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1203]-1209 p. [Text dated 21 July 1748].

XCVI. De | Bolo | Armena | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1210]-1214 p. [Text dated 22 July 1748].

XCVII. De | Medvllis | Saxorvm | Mvsei | Brückmanniani | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1215]-1223 p. [Text dated 23 July 1748].

XCVIII. De | Margis | Collectionis | Brückmannianae | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1224]-1229 p. [Text dated 1 August 1748].

XCIX. De | Terra | St. Ulrici | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1230]-1240 p., one plate (no. XLIII, minerals). [Text dated 6 August 1748].

C. De | Creta | Veneta | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1748. 4°: [1241]-1249 p. [Text dated 6 August 1748].

Svpplementvm. Wolfenbvtelae, 1748. 4°: [1250]-1266 p., one plate (no. XLII, pear?).

Sectional title page, "Kurzer | jedoch | umständlicher Bericht | Von | Dem zu Osteroda neu entsprungenem | Gefund= und Wunder= | Brunnen, | Und zwar dessen | Erfindung, Situation, Geschmack und | Lieblichkeit, Anstalt und Ordnung, | Gebrauch, Würkung und | Exempla. | [rule] | Im Jahr 1705," pp. [1267]-1296, one plate (no. XLIX, agates).

Index, 43 p.; [1 pg], Blank.; [At end], Museum Closterianvm.

[Volume 3]

I. De | Creta Vvlgari | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [1]-12 p. [Text dated 3 May 1750].

II. De | Creta Nigra | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [13]-16 p. [Text dated 4 May 1750].

III. De | Creta Rvbra | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [17]-21 p. [Text dated 10 May 1750].

IV. De | Ochra | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [22]-29 p. [Text dated 19 May 1750].

V. De | Terra Vmbra | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [30]-33 p. [Text dated 29 May 1750].

VI. De | Terris Medicinalibvs | in Genere | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [34]-30 (i.e., 40) p. [Text dated 29 May 1750].

VII. De | Terris Sigillatis | Mvsei Brückmanniani | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [41]-66 p., one folding plate (seals) [Text dated 1 July 1750].

VIII. De | Terris Sigillandis | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [67]-73 p. [Text dated 21 July 1750].

IX. Sistens | Terras Metallicas | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [74]-84 p. [Text dated 22 July 1750].

X. De | Lacte Lvnae, | Terra Tripolitana | Et | Reliqvis Terris | Mvsei Avtoris | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [85]-91 p. [Text dated 29 July 1750].

XI. De | Terris | Non Satis Cognitis | ... | Christ. Gottl. Ludwig | ... | Wolfenbvtelae, 1750. 4°: [92]-101 p. [Text dated 1 August 1750].

XII. Sistens | Memorabilia | Lipsiensia | ... | Georg. Fridr. Mohr | ... | Wolfenbvtelae, 1750. 4°: [102]-109 p., one plate (Egyptian sarchophagus). [Text dated 7 August 1750].

XIII. De | Bibliothecis | Lipsiensibvs | ... | Pavl. Henr. Gerh. Möhring | ... | Wolfenbvtelae, 1750. 4°: [110]-143 p., one plate (interior of library). [Text dated 8 August 1750].

XIV. De | Mvseis | Lipsiensibvs | ... | Franciscvm De Ziegler | ... | Wolfenbvtelae, 1750. 4°: [144]-187 p., 3 folding plates (p. 145, fossil fish, p. 146, fossils, and p. 149, instruments). [Text dated 9 August 1750].

XV. Sistens | Memorabilia | Misnica | ... | Ioh. Christ. Effenberger | ... | Wolfenbvtelae, 1750. 4°: [188]-195 p. [Text dated 13 August 1750].

XVI. Sistens | Memorabilia | Dresdensia | ... | Gottl. Heinrich Stvck | ... | Wolfenbvtelae, 1750. 4°: [196]-212 p. [Text dated 19 August 1750].

XVII. Offerens | Inventa | Gärtneriana | ... | Christ. Andr. Cothenivm | ... | Wolfenbvtelae, 1750. 4°: [213]-240 p. [Text dated 20 August 1750].

XVIII. Sistens | Memorabilia | Pragensia | ... | Gebh. Henr. Carstens | ... | Wolfenbvtelae, 1750. 4°: [241]-262 p., one folding plate (saints). [Text dated 30 August 1750].

XIX. De | Academia | Pragensi | ... | Fridericvm Boerner | ... | Wolfenbvtelae, 1750. 4°: [263]-267 p. [Text dated 2 September 1750].

XX. Religione | Bohemica | ... | Sal. Frideric. Meyer | ... | Wolfenbvtelae, 1750. 4°: [268]-274 p. [Text dated 13 September 1750].

XXI. Sistens | Memorabilia | Bohemica | ... | Emanvel. Mendes Da Costa | ... | Wolfenbvtelae, 1750. 4°: [275]-282 p. [Text dated 14 September 1750].

XXII. Sistens | Memorabilia | Moravica | ... | De Eckhardt | ... | Wolfenbvtelae, 1750. 4°: [283]-289 p., one folding plate. [Text dated 15 September 1750].

XXIII. De | Dvlcedine | Secessvs Rvralis | ... | De Arnim | ... | Wolfenbvtelae, 1750. 4°: [290]-297 p. [Text dated 16 September 1750].

XXIV. De | Planta | Agnifera | sev | Melone Agniform | ... | Iodoc. Leop. Frisch | ... | Wolfenbvtelae, 1750. 4°: [298]-301 p. [Text dated 20 September 1750].

XXV. Offerens | Rariora | Mvsei | Carsteniani | ... | Frideric. Wilhel. Vehr | ... | Wolfenbvtelae, 1750. 4°: [302]-310 p. [Text dated 29 September 1750].

XXVI. Sistens | Memorabilia | Avstrica | ... | De Arnim | ... | Wolfenbvtelae, 1751. 4°: [311]-327 p. [Text dated 2 January 1751].

XXVII. Sistens | Memorabilia | Viennensia | ... | Ioh. Christoph. | De Dreyhavpt | ... | Wolfenbvtelae, 1751. 4°: [328]-340 p. [Text dated 4 February 1751].

XXVIII. Exhibens | Memorabilia | Viennensia | ... | Ioh. Christoph. | De Dreyhavpt | ... | Wolfenbvtelae, 1751. 4°: [341]-355 p. [Text dated 7 February 1751].

XXIX. Viridaria | Achortosviennenses | Exhibens | ... | Casimir. Christoph. | Schmiedelivm | ... | Wolfenbvtelae, 1751. 4°: [356]-367 p. [Text dated 3 March 1751].

XXX. De | Vniversitate | Vindobonensi | ... | Fridericvm Boerner | ... | Wolfenbvtelae, 1751. 4°: [368]-376 p. [Text dated 4 March 1751].

XXXI. De | Cosma | Et Damiano | ... | Gottlieb Hannævm | ... | Wolfenbvtelae, 1751. 4°: [375]-385 p. [Text dated 17 March 1751].

XXXII. De | Templis | Et | Monasteriis | Vindobonensibvs | ... | Christ. Frid. Boernervm | ... | Wolfenbvtelae, 1751. 4°: [386]-413 p. [Text dated 18 March 1751].

XXXIII. Sistens | Monasteria | Virginvvm | Religiosarvm | Viennensia | ... | Christ. Frid. Boernervm | ... | Wolfenbvtelae, 1751. 4°: [414]-421 p. [Text dated 26 March 1751].

XXXIV. Sistens | Monasteria | Vindobonensia | Svbbvrbana | ... | Christ. Frid. Boernervm | ... | Wolfenbvtelae, 1751. 4°: [422]-431 p. [Text dated 27 March 1751].

XXXV. De | Statvis | Vindobonensibvs | ... | Samvel. Theophilvm. | Langivm | ... | Wolfenbvtelae, 1751. 4°: [432]-433 p. [Text dated 1 May 1751].

XXXVI. Sistens | Mvsea | Viennensia | ... | Pavlvm Henr. Gerh. Moehring | ... | Wolfenbvtelae, 1751. 4°:

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[434]-440 p. [Text dated 2 May 1751].

XXXVII. Exhibens, | Religionem | Viennae | Concermentia | ... | Christophor. Wölle | ... | Wolfenbvttelae, 1751. 4°: [441]-454 p. [Text dated 3 May 1751].

XXXVIII. De | Die Cinerum | ... | Otto. Ioachimvm Anhalt | ... | Wolfenbvttelae, 1751. 4°: [455]-460 p. [Text dated 4 May 1751].

XXXIX. De | Rosario | ... | Ioh. Arnoldvm Ballenstedt | ... | Wolfenbvttelae, 1751. 4°: [461]-474 p. [Text dated 17 June 1751].

XL. De | Agno Dei | ... | Frider. Christianvm Lesser | ... | Wolfenbvttelae, 1751. 4°: [475]-479 p. [Text dated 18 June 1751].

XLI. De | Indvlgentiis | ... | M. Christoph. Gottlob | Grvndig | ... | Wolfenbvttelae, 1751. 4°: [480]-488 p. [Text dated 21 July 1751].

XLII. De | Purgatorio | ... | Pavl. Dan. Longolvm | ... | Wolfenbvttelae, 1751. 4°: [489]-499 p. [Text dated 22 July 1751].

XLIII. De | Aqua Benedicta | ... | Sal. Frider. Meyer | ... | Wolfenbvttelae, 1751. 4°: [500]-503 p. [Text dated 1 September 1751].

XLIV. De | Cibis | Viennensium | Singvlaribvs | ... | Pet. Christ. Wagnervm | ... | Wolfenbvttelae, 1751. 4°: [504]-509 p. [Text dated 3 September 1751].

XLV. De | Rebus Qvibvsdam | Medicis Vinnensibvs | ... | Avgvst. Schaarschmidt | ... | Wolfenbvttelae, 1751. 4°: [510]-523 p. [Text dated 4 September 1751].

XLVI. Sistens | Scriptorum | Rervm Viennensium | ... | Henr. Sigism. De Wengler | ... | Wolfenbvttelae, 1751. 4°: [524]-537 p. [Text dated 5 September 1751].

XLVII. De | Rebus Sanctis | Mvsei Avtoris | ... | Maximil. Erast. | De Hopffgarten | ... | Wolfenbvttelae, 1751. 4°: [538]-554 p. [Text dated 7 September 1751].

XLVIII. De | Rebus Religiosis | Mvsei Avtoris | ... | Maximil. Erast. | De Hopffgarten | ... | Wolfenbvttelae, 1751. 4°: [555]-565 p. [Text dated 1 September 1751].

XLIX. De | Nvmms | Et | Cereis Benedictis | Mvsei Avtoris | ... | Maximil. Erast. | De Hopffgarten | ... | Wolfenbvttelae, 1751. 4°: [566]-572 p. [Text dated 1 October 1751].

L. Sistens | Cvriosa Mvsei | Brückmanniani | In Itineribvs Collecta | ... | Anth. Adam. De Mansberg | ... | Wolfenbvttelae, 1751. 4°: [573]-581, [582] p. [Text dated 3 October 1751].

LI. Offerens | Notas | Et Observationes | In I.H. De Hevcher | Scripta Botanica | ... | Io. Georg. Gmelin | ... | Wolfenbvttelae, 1752. 4°: [583]-627 p. [Text dated 3 January 1752].

LII. Offerens | Notas | Et Animadversiones | In Dominici Chabraei | Stripivm Icones Et Sciagraphiam | ... | Io. Henr. De Sprekelsen | ... | Wolfenbvttelae, 1752. 4°: [628]-677 p. [Text dated 7 January 1752].

LIII. Sistens | Notas | Et Animadversiones | ini.g. Volckameri Floram | Noribergensem | ... | Ioh. Franciscvm | Segvievum | ... | Wolfenbvttelae, 1752. 4°: [678]-705 p. [Text dated 17 February 1752].

LIV. Sistens | Notas | Et Animadversiones | In Prosperi Alpini De | Plantis Aegypti | Librivm | ... | Iohan. Bvrmannvm | ... | Wolfenbvttelae, 1752. 4°: [706]-716 p. [Text dated 27 February 1752].

LV. Offerens | Notas | Et Animadversiones | In Ioh. Ioach. Becheri | Parnassi Illvstrati | Partem Alteram, | Phytologiam | ... | Christian. Ierem. Rollin | ... | Wolfenbvttelae, 1752. 4°: [715]-742 p. [Text dated 3 March 1752].

LVI. Sistens | Fragmentvm | Collegii Botanici | A Beato Henr. Bernh. | Rvppio, | Bottanico | Celeberrimo, Incepti. | ... | Wolfenbvttelae, 1752. 4°: [743]-775 p. [Text dated 2 April 1752].

LVII. Sistens | Notas | Et Animadversiones | In Henr. Mvndii Opera | Omnia Phisico | Medica | ... | Ioh. Frid. Gronovivm | ... | Wolfenbvttelae, 1752. 4°: [776]-779 p. [Text dated 1 May 1752].

LVIII. Offerens | Notas | Et Animadversiones | In Henr. Bernh. Rvppiim | ... | Ioh. Sebast. Albrecht | ... | Wolfenbvttelae, 1752. 4°: [780]-789 p. [Text dated 21 May 1752].

LVIII. Sistens | Memorabilia | Lentiaca | ... | Georg Henric. Behr | ... | Wolfenbvttelae, 1752. 4°: [790]-794 p. [Text dated 25 May 1752].

LX. Sistens | Memorabilia | Ratisbonensia | ... | Ioh. Bapt. Bohadsch | ... | Wolfenbvttelae, 1752. 4°: [795]-818 p. [Text dated 3 June 1752].

LXI. Offerens | Memorabilia | Altdorfina | ... | Ioh. Phil. Gravel | ... | Wolfenbvttelae, 1752. 4°: [819]-827 p. [Text dated 1 August 1752].

LXII. Sistens | Memorabilia | NOribergensia | ... | Iohann. Gessner | ... | Wolfenbvttelae, 1752. 4°: [828]-841 p. [Text dated 3 August 1752].

LXIII. De | Bibliothecis | Ac Mvseis | Noribergensibvs | ... | Fridericvm Boerner | ... | Wolfenbvttelae, 1752. 4°: [842]-857 p. [Text dated 17 August 1752].

LXIV. Sistens | Memorabilia | Cobvrgensia | ... | Henric. Frideric. | Delivm | ... | Wolfenbvttelae, 1752. 4°: [858]-862 p. [Text dated 18 August 1752].

LXV. Sistens | Bibliothecas | Ac Mvseas | Cobvrgensia | ... | Ioh. Frid. Gronovivm | ... | Wolfenbvttelae, 1752. 4°: [863]-868 p. [Text dated 23 August 1752].

LXVI. Sistens | Memorabilia | Gvelperbyтана | ... | Casmir. Christoph. Schmiedelivm | ... | Wolfenbvttelae, 1752. 4°: [869]-877 p. [Text dated 29 August 1752].

LXVII. Sistens | Bibliothecam | Avgvstam | Wolfenbvttelensem | ... | Gottlieb Hannaevm | ... | Wolfenbvttelae, 1752. 4°: [878]-884 p. [Text dated 1 September 1752].

LXVIII. De | Armamentario | Lycopolitano | ... | Ioh. Daniel Denso | ... | Wolfenbvttelae, 1752. 4°: [885]-927 p. [Text dated 17 September 1752].

LXIX. De | Mvseis | Lycopolitanis | ... | Emanuel Gottlieb | Harrer | ... | Wolfenbvttelae, 1752. 4°: [928]-940 p. [Text dated 3 October 1752].

LXX. Exhibens | Memorabilia | Brvnsvicensia | ... | Iacobvm Theodorvm | Klein | ... | Wolfenbvttelae, 1752. 4°: [941]-951 p. [Text dated 3 November 1752].

LXXI. De | Templis | Brvnsvicensibvs | ... | Iodocvm Leopoldvm | Frisch | ... | Wolfenbvttelae, 1752. 4°: [952]-963 p. [Text dated 1 December 1752].

LXXII. Rariora | Mvsei Schmidiani | ... | Zachar. Pfannenschmidt | ... | Wolfenbvttelae, 1752. 4°: [964]-966 p. [Text dated 7 December 1752].

LXXIII. Exhibens | Memorabilia | Vallis Salinarvm | ... | Pavl. Henr. Gerardvm | Moehringivm | ... | Wolfenbvttelae, 1753. 4°: [967]-981 p. [Text dated 2 January 1753].

LXXIV. Offerens, | Memorabilia | Regiae Lvtrae | ... | Christianvm Fridericvm | Boernervm | ... | Wolfenbvttelae, 1753. 4°: [982]-993 p. [Text dated 4 January 1753].

LXXV. Sistens | Memorabilia | Blankenbvrgica | ... | Ioh. Gottfr. Mvller | ... | Wolfenbvttelae, 1753. 4°: [994]-998 p. [Text dated 7 January 1753].

REFERENCES: BL: [462.b.1.]. • CBN. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 128n. • Hoover Collection: no. 176 [volume 2 only]. • LKG: VI 10. • Murray, *Museums*, 1904: 1, 112-5. • Wellcome Catalog (Books): 2, 255.

892. — Latin, 1727.

Theses physicae ex hist. nat. cur. lapidis. Brunsvigæ, 1727.

8°: RARE.

REFERENCES: LKG: XVI 106.

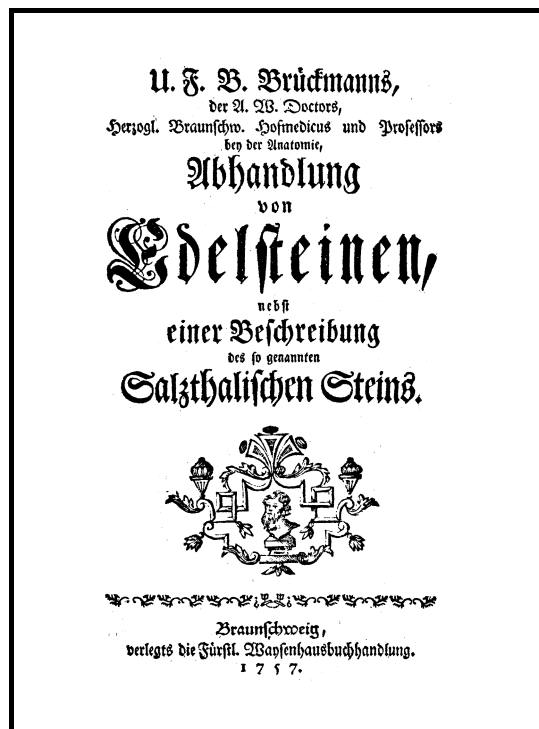
BRÜCKMANN, Urban Friedrich Benedict. (BORN: Wolfenbüttel, Germany, 23 April 1728; DIED: Braunschweig, Germany, 20 June 1812) *German physician, gemologist & mineralogist.*



U.F.B. BRÜCKMANN

Son of FRANZ ERNST BRÜCKMANN, he was the professor of anatomy and surgery at the University of Braunschweig. He formed a 10,000 specimen collection of natural history including a large suite of minerals.

REFERENCES: ADB. • Baldinger, *Biographien Ärzte*, 1768-71. • Börner, *Vornehmsten Lebensumständen*, 1749-64. • *Catalogue of Portraits of Naturalists*: 231 [2 portraits listed]. • DBA: I 150, 119-133; 1426, 143; II 184, 251-252. • Ferchl. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • NY Academy Portrait Catalog: 1 [1 portrait listed]. • Poggendorff: 1, col. 313. • WBI.



ABHANDLUNGEN VON EDELSTEINEN, 1757

893. — German, 1757 [First edition].

U.F.B. Brückmanns, | der A.W. Doctors, | Herzogl. Braunsch. Hofmedicus und Professors | bey der Anatomie, | Abhandlung | von | Edelsteinen, | nebst | einer Beschreibung | des so genannten | Salzthalischen Steins. | [ornament] | [ornate rule] Braunschweig, | verlegt die Fürstl. Waysenhausbuchhandlung. | 1757.

8°: A-J⁸)(4 (J8 blank); 76ℓ.; [1]-143, [9] p. PAGE SIZE: 190 x 120 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-5, "Vorrede."; 6-8, "Eintheilung der Edelsteine | überhaupt."; [9]-143, Text.; [1 pg], Blank.; [8 pgs], "Register."

RARE. A remarkable book that incorporates Brückmann's personal observations of gemstones, minerals and fossils under an umbrella of a general treatise on precious stones. Throughout the text, the author displays his extensive knowledge of the subject, incorporating numerous quotations and citations to the mineralogical literature of the time, while giving his own perceptive views on the subject under examination. The classification he adopts to arrange the stones is an innovation. Through his father's extensive collection, Brückmann had considered mineralogical subjects his entire life, and the insight he brings to his descriptions shows the extent of gemological knowledge of the 18th century. Sinkankas gives a full description.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 457. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 18. • *Göttingische gelehrte Anzeigen*: 1758, p. 739. • Sinkankas, *Gemology Bibliography*, 1993: no. 974. • Ward & Carozzi, *Geology Emerging*, 1984: no. 356.

894. 2nd edition, 1773: Urban Friederich Benedict | Brückmann, | der Arzneywissenschaft Doctor und Herzogl. Braun= | schweigischen Leibmedicus, | Abhandlung | von | Edelsteinen. | [ornament] | [rule] | Zweyte verbesserte und vermehrte | Auflage. | [double rule] Braunschweig, | im Verlag der Fürstl. Waysenhaus=Buchhandlung | 1773.

8°: A-Cc⁸; 208ℓ.; [1]-415, [1] p. Title vignette. PAGE SIZE: 196 x 120 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-[6], Dedication, dated 26 April 1773.; [7]-[12], "Vorrede."; [13]-[14], "Eintheilung der Edelsteine überhaupt."; [15]-16, "Anmerkung."; [17]-358, Text.; 359-388, "Anhang | Von den größtentheils unbekannten | sogenannten Edelsteinen."; 389-415, "Register."; [1 pg], Blank.

RARE. Rewritten and enlarged edition with the addition of many new stones, and a valuable appendix, "Von den größtentheils unbekannten sogenannten Edelsteinen" (pp. 359-388), that attempts to identify the so-called gemstones of the ancient writers. As Sinkankas writes: "This glossary is unique and deserves to be translated with an interpretation in the light of modern knowledge; there are hundreds of terms and I know of no other place in the literature where a similar glossary of ancient gemological/mineralogical terms exists." Brückmann also expands his system of classification incorporating new categories and ornamental materials such as marble, granite, etc. Since the appearance of the first edition in 1757 the author had researched extensively to write this enormously enlarged treatment. He carried on his research issuing two supplemental parts that are described below.

REFERENCES: *Allgemeine Deutsche Bibliothek*: Suppl. to volumes 13-24, p. 584. • BL: [987.h.24]. • *Freilich Sale Catalog*: no. 103. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 18. • Hoover Collection: no. 185. • LKG: XVI 231. • Roller & Goodman, *Catalogue*, 1976: 1, 175. •

BRÜCKMANN

Sinkankas, *Gemology Bibliography*, 1993: no. 975.

895. First suppl., 1778: Urban Friederich Benedict Brückmanns, | [4 lines of titles and memberships] Gesammlete und Eigene | Beyträge | zu seiner | Abhandlung | von | Edelsteinen. | [vignette] | [rule] | Braunschweig, | in der Fürstl. Waisenhaus=Buchhandlung. 1778.

8°: *4 A-P8 Q-R4; 132ℓ.; [8],[1]-252, [4] p. PAGE SIZE: 195 x 110 mm.

CONTENTS: [2] pgs, Title page, verso blank.; [6] pgs, "Vorrede."; [1]-252, Text.; [4] pgs, "Register."

RARE. This supplement enhances and expands the basic text of *Abhandlungen von Edelsteinen* (2nd ed., Braunschweig, 1773), giving additional citations to the literature and additional locality information. Brückmann also incorporates the results of various chemical analysis on stones he has examined and reviews of the latest discoveries in mineralogy, as it pertains to gemological studies. Interestingly a large amount of information on the synthetic manufacture of various minerals and gemstones is incorporated, including descriptions of how to determine fake stones. This is among the first works to treat the subject of mineral synthesis.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 72, 132. • BL: [987.h.25.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 18. • Hoover Collection: no. 186. • Sinkankas, *Gemology Bibliography*, 1993: no. 976.

896. 2nd suppl., 1783: Urban Friederich Benedict Brückmanns | [4 lines of titles and memberships] | Gesammlete und Eigene | Beyträge | zu seiner | Abhandlung | von | Edelsteinen. | Zwote Fortsetzung. | [rule] | Braunschweig, | in der Fürstl. Waisenhaus=Buchhandlung. 1783.

8°: A-Q⁸; ??ℓ.; [1]-250, [6] p. PAGE SIZE: 195 x 110 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], Dedication.; [4], Blank.; [5]-8, "Vorrede."; [9]-250, Text.; [4] pgs, "Register."; [1] pg, "Druckfehler."; [1] pg, Blank.

RARE. Brückmann continues to add information through this second supplement, the last in the series.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 62, no. 1, 132. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 18. • Sinkankas, *Gemology Bibliography*, 1993: no. 977.

897. Russian transl., 1779: Sochinenie o dragotsennykh kamniakh s pribavleniem opisaniia tak nazyvaemago Zal'tstal'skago kamnia Gospodina U.F.B. Brikmana, Meditsiny Doktora, Gertsogskago Braunschweiskago pridvornago Medika i Anatomii Professora; perevod Shikht-meistera Vasil'ia Bupalova; razsmotrieno v uchrezhdenom pri Gornom Uchilishchie Sbranii Chlenami Oberbergmeisterami Aleksandrom Karamyshevym i Ivanom Khennittserom. Sanktpeterburg, Pechatano pri onom zhe uchilishchie, 1779.

8°: 224 p.

RARE. Abridged translation by Vasilii Osipovich Bupalov [1752-] & Aleksandr Matveevich Karamyshev [1744-1791] of *Abhandlungen von Edelsteinen* (2nd ed., Braunschweig, 1773).

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: [no copy listed]. • *Svodnyi Katalog Russkoï Knigi*: no. 744.

898. — German, 1777.

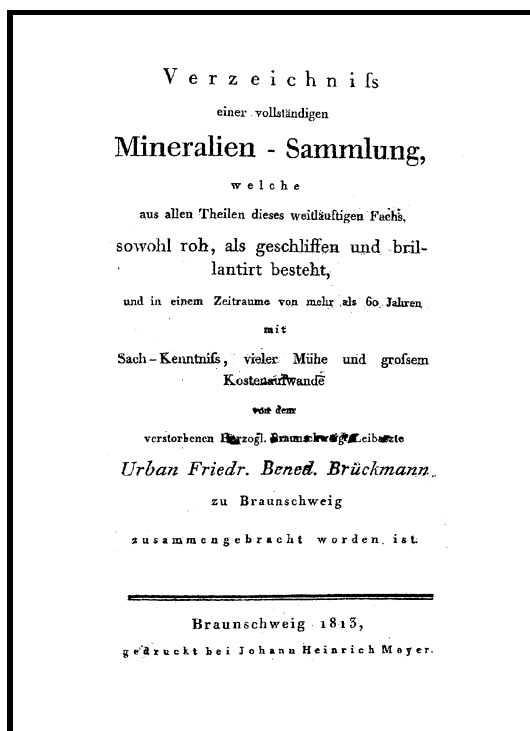
Urban Friedrich Benedict Brückmanns | [...3 lines of titles and memberships...] | Abhandlung | von dem | Welt -Auge, | oder | Lapide Mutabili. | [ornament] | [double rule] | Braunschweig, | im Verlage der Fürstl. Waisenhaus=Buchhandlung. 1777.

4°: A-B⁴; 8ℓ.; [1]-16 p.

VERY RARE. This monograph describes opals from several european localities, but particularly Hungary.

REFERENCES: *Beckmann P.O.B.*: 8, 437. • BL: [B.371.(9.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 63 ["Ganz gute Bemerkungen enthaltend"]. • LKG: XVI

365. • Sinkankas, *Gemology Bibliography*, 1993: [no copy listed].



VERZEICHNISS, 1813

899. — German, 1813 [Sale catalog].

Verzeichniß | einer vollständigen | Mineralien-Sammlung, | welche | aus allen Theilen dieses weitläufigen Fachs, | sowohl roh, als geschliffen und bril- | lantirt besteht, | und in einem Zeitraume von mehr als 60 Jahren | mit | Sach-Kenntniß, vieler Mühe und grossem | Kostenaufwande | von dem | vorstorbenen Herzogl. Braunschweig Leibarzte | Urban Friedr. Bened. Brückmann | zu Braunschweig | zusammengebracht worden ist. | [double rule] | Braunschweig 1813, | gedruckt bei Johann Heinrich Meyer.

8°: [i]-viii, [1]-432 p. PAGE SIZE: 186 x 104 mm.

VERY RARE. Auction sale catalog of Brückmann's gem and mineral collection, which he had amassed through over 60 years of collecting, with great effort and much expense. As would be expected from his textbook on gemology, Brückmann had a particular fondness for gem minerals and these are represented throughout the catalog in both cut and natural crystal specimens. Over 6,000 lots are described in the text. The sale took place after Brückmann's death, and was initiated by his heirs.

REFERENCES: BL: [974.b.25.]. • Wilson, *History of Mineral Collecting*, 1994: 163 & 207.



BRUGMANS

BRUGMANS, Sebalde Justin. (BORN: Franeker, The Netherlands, 24 March 1763; DIED: Leyden, The Netherlands, 22 July 1819) *Dutch physician.*

Son of Dutch naturalist Anton Brugmans [1732-1789], he was a physician and professor of philosophy and physics at the University of Franeker. From 1795 onwards, he held the professorships of medicine and chemistry at the University of Leyden. He was also General-Inspector of the hospitals of Leyden.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78. • BAB: 108, 248-270. • *Biographie Universelle*. • Fischer, *Biographisches Lexikon der Ärzte*, 1932-3; 1, 596 [by C.E. Daniëls]. • Klaauw, C.J. van der, "Een verzameling uit den eersten tijd van de vergelijkende ontleedkunde (De collectie Brugmans)," *Natuur*, 50 (1930), 20 p., illus. [Description of Brugmans collection, now preserved in the Museums of the University of Leyden]. • Kobus, *Biographisch Woordenboek*, 1886. • NNBW. • Poggendorff: 1, col. 316. • WBI.

900. Dissertation, 1781: Sebalde Justin | Brugmans | Lithologia Groningana, | Ivxta Ordinem Wallerii | Digesta, | Cvm Synonymis Aliorum, Imprimis | Linnaei Et Cronstedii. | Cvm Figvris Aeneis. | Pvblice Defensa, | Cvm Svmmos In Philosophia Honores, | In Academia Groningo-Omlandica | Consequeretvr. | [ornate rule] | Groningae. | [double rule] | Apud P. Doekema & R. Muller. | MDCCLXXXI.

8°: π^4 A-H4; [8], [1]-120 p., one hand-colored engraved plate (showing 8 figures of mineral specimens). Only in some copies is the plate colored. PAGE SIZE: 228 x 140 mm. uncut

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Petro van Bleiswyk.; [1 pg], Blank.; [4 pgs], "L.S." [=preface].; [1]-120, Text.

RARE. This dissertation describes the minerals and rocks found around Groningen in The Netherlands. The descriptions are digested into the mineralogical system of J.G. WALLERIUS. Synonyms from the writings of LINNEAUS and CRONSTEDT are provided for the individual items. The plate gives illustrations of several specimens. This work was publicly defended by Brugmans to obtain a philosophical degree from the Academy at Groningen.

REFERENCES: BL: [B.551.(1.)]. • *Freilich Sale Catalog*: no. 104. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 112. • LKG: XIV 703. • NLM 18th Century Books (Blake): 68. • NUC: 80, 408 [NB 0885596]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 357.

BRUHNS, Franz Siegfried Willy. (BORN: Leipzig, Germany, 5 February 1864; DIED: 1929) *German*

mineralogist & petrologist.

Bruhns was a professor of mineralogy sequentially at the University of Bonn (1889-1894), the University of Strausbourg (1894-1909), and the Mining Academy at Clausthal from 1909.

REFERENCES: DBA: II 187, 67-69. • *Mineralogical Magazine*: 22 (1930), no. 131, 389-90. • Poggendorff: 4, 193. • Sarjeant, *Geologists*, 1980: 2, 638. • WBI.

901. — German, 1902.

Elemente | der | Krystallographie | Von | Dr. W. Bruhns | A.O. Professor An Der Universität Strassburg. | [rule] | Mit 346 Figuren Im Text. | [rule] | Leipzig und Vienna. | Franz Deuticke. | 1902.

8°: π^4 1-13⁸ 142; 110 ℓ .; [i]-vi, [2], [1]-211, [1] p., 346 illus. PAGE SIZE: 258 x 165 mm. uncut.

CONTENTS: [i-ii], Title page, verso "Verlags-Nr. 816."; [iii], "Vorwort."—signed W. Bruhns, May 1902.; [iv], "Berichtigung."; [v]-vi, "Inhalt."; [1 pg], "Corrigenda."; [1 pg], Blank.; [1]-204, Text.; [205]-211, "Register."; [1 pg], Blank.

SCARCE. Written for the beginner interested in crystallography, this *Elements of Crystallography* provides a good introduction to the science. The first part (pp. 1-23) covers general material like definitions, crystal measurement and projections. The next section (pp. 24-116) describes the crystal forms (cubic, tetragonal, hexagonal, trigonal, monoclinic, and triclinic), and twinning. The final part (pp. 117-184) describes physical crystallography, including cohesion, etch figures, elastic deformation, hardness, and the optical, thermal, magnetic and electrical properties of crystals. At the conclusion are short discussion of the relationship between chemistry and crystal form, an overview of the 32 classes of crystal forms and an index to the text.

REFERENCES: BL. • Dana's 7th (Bibliography): 68. • NUC.

902. — German, 1904 [First edition].

Sammlung Götschen | [rule] | Kristallographie | Von | Dr. W. Bruhns | a.o. Professor and der Universität Straßburg i.F. | Mit 190 Abbildungen | [ornate rule] | Leipzig | C.F. Götschen'sche Verlagshandlung | 1904.

8°: π^8 2-9⁸ 107; 79 ℓ .; [1]-144, 1-14 p., 190 illus. PAGE SIZE: 148 x 100 mm.

CONTENTS: [1-2], Title page, verso "Alle Rechte, ..."; 3-4, "Inhalt."; 5-6, "Vorbemerkung."; [7]-141, Text.; [142]-144, "Register."; 1-14, Publisher's list of other titles.

SCARCE. Covers the basics of crystallography, including an overview and descriptive analysis of the 32 classes of crystal forms together with discussions of the physical, thermal, electric and magnetic properties of crystals.

Reissue, 1912: *Kristallographie*. Berlin, Sammlung Götschen, 1912. 8°: [1]-144 p., 190 illus.

3rd edition, 1937: *Kristallographie*. Berlin & Leipzig, Walter de Gruyter & Co., 1937.

REFERENCES: BL. • NUC.

BRUNNER

903. — German, 1906.

Die | Nutzbaren Mineralien | Und Gebirgsarten
Im | Deutschen Reiche | Auf Grundlage Des
Gleichnamigen | v. Dechenschen Werkes Neu
Bearbeitet | Unter Mitwirkung von H. Bücking |
Ord. Prof. An Der Univrsität Strassburg | Durch
| W. Bruhns | A.O. Prof. An Der Universität
Strassburg | Mit Einer Geologische Karte |
[ornament] | Berlin | Druck Und Verlag Von Georg
Reimer | 1906.

8°: xix, 859 p., folding map. "Literatur," p. [710]-760.

VERY SCARCE. In this economic mineralogy, the useful minerals and rock formations of the German state are studied.

REFERENCES: BL. • NUC.

BRUN (Bruun), Conrad.

See: Malte-brun, Conrad.

BRUNLECHNER, August. (BORN: Leoben, Austria, 30 May 1849; DIED: Klagenfurt, Austria, 24 April 1916) *Austrian mining engineer & mineral collector.*

Brunlechner attended the Mining Academy in Chemnitz, Hungary, and the Mining Academy in Leoben, where in 1872 he became an assistant professor of mining and manufacture. He worked at the mercury mines of India, before being appointed to the Mining School in Klagenfurt in 1879. In 1899 he also took on the role of custodian to the school's museum.

REFERENCES: DBA: II 187, 355. • Meixner, *Mineralogischen Erforschung Kärntens*, 1951. • *Österreich Biographisches Lexikon*. • WBI.

904. — German, 1884.

Die Minerale | Des | Herzogthums Kärnten. | Von
| August Brunlechner. | Professor der Bergschule
in Klagenfurt. | Mit Einer Karte. | Klagenfurt. |
Verlag Von Ferd. V. Kleinmayr. | 1884.

8°: π^4 1-88 91; 69 ℓ .; [i]-vi, [2], [1]-130 p., one folding map ("Karte von Kärntern"). PAGE SIZE: 228 x 155 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Victor Ritter von Zeparovich.; [iv], Blank.; [v]-vi, Preface, signed August Brunlechner, December 1883.; [1 pg], "Literatur-Verzeichniss."; [1 pg], "Abkürzungen."; [1]-112, Text.; [113]-130, "Verzeichniss | der | Mineral-Fundorte in Kärnten."; [At end], One folding map.

SCARCE. A topographical mineralogy describing the minerals found in the area of Carinthia in Austria. It is designed as a collector's guide and contains a good map of the area.

REFERENCES: BL: [7106.h.19.(4.)]. • Milojević, *Geoloska Bibliografija Jugoslavije*, 1952.

BRUNNER, Joseph. (BORN: Griesbach, Niederbayern, Germany, 23 March 1764; DIED: Bodenmais, Germany, 14 April 1807) *German mining official.*

Official in the Bavarian government and later royal administrator of the mining works at Bodenmais.

REFERENCES: Lambrecht & Quenstedt, *Catalogus*, 1938: 63. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 321.

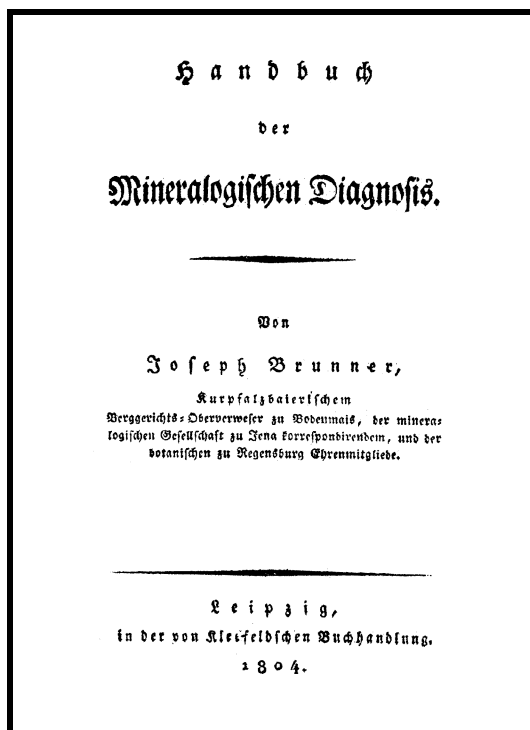
905. — German, 1800 [First edition].

Versuch | eines | neuen Systems | der |
Mineralogie. | Zur Erleichterung ihres Studiums
| für Anfänger und Liebhaber, | die sich selbst
unterrichten wollen. | Von | Joseph Brunner, |
[...2 lines of titles and memberships...] | [tapered rule]
Leipzig, | in der von Kleefeldschen Buchhandlung.
| 1800.

8°: [1]-208 p.

VERY SCARCE. This is the author's attempt at organizing minerals into a system according to their external characters. It shows little advance over other classifications of the time.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 100. • BL: [954.a.37.]. • BMC: 1, 267. • *Freilich Sale Catalog*: no. 105. • LKG: XII 152. • NUC: 81, 1 [NB 0893148].



HANDBUCH, 1804

906. 2nd edition, 1804: Handbuch | der | Mineralogischen
Diagnosis. | [tapered rule] | Von | Joseph Brunner, |
[...4 lines of titles and memberships...] | [tapered rule] |
Leipzig, | in der von Kleefeldschen Buchhandlung. | 1804.
8°: [*]-***8 A-S8 T7 U8 X4; 187 ℓ .; [i]-xlviii, [1]-326 p. PAGE SIZE: 177 x 97 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii-iv], Dedication to Jena Mineralogical Society, verso blank.; [v]-xlviii, "Vorrede."—dated January, 1803; [1]-52, "Einleitung."; 53-70, "Uebersicht. | Eigentliche oder ursprüngliche Mi= | neralien."; 71-74, "Neue und fremdartige Mineral= | ien."; [75], "System | der | Oryktognosie."; [76], Blank.; 77-245, "Eigentliche Mineralien."; 246-266, "I. Anhang. | Neue und

fremdartige Mineralien = | lien.”; 267-275, “II. Anhang. | Namen der Mineralmenge.”; 276-302, “III. Anhang. | Chemische Verwandtschaft der | Mineralien.”; 303-326, “Alphabetisches | Verzeichniß | der | Mineralien.”

VERY SCARCE. Completely revised edition, based on Lenz's *Mineralogisches Taschenbuch* (Erfurt, 1798-9). Brunner's mineralogical system offered little that was either new or interesting. Typical of the period, the external characters play a great part, and the chief divisions are Earths, Salts, Bitumens and Metals. The first of these is subdivided according to structure into earthy or powdery, fine bladed, leafy, star-like, fibrous, fine-grained and dense or compact. The salts are split according to their taste into sour and sweet assemblages. The volume begins with discussions of color, external form, fracture, and luster. An overview of the system is then presented, followed by the complete system including a section devoted to new minerals. The book concludes with an index to minerals mentioned.

REFERENCES: BL: [954.a.38.]. • LKG: XII 152 & XIII 224a. • NUC: 81, 1 [NB 0893149]. • Roller & Goodman, *Catalogue*, 1976: 1, 177.

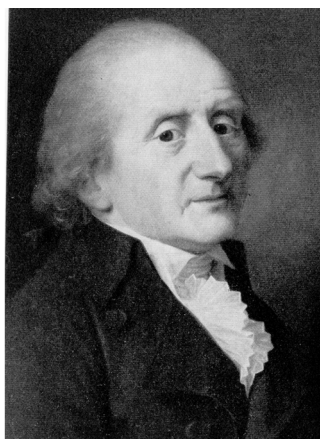
907. — German, 1801.

Neue Hypothese von Entstehung der Gänge von Joseph Brunner. Leipzig, In der von Kleefeldschen Buchhandlung, 1801.

8°: 84, [2] p., [1] folded leaf of plates, illus. VERY SCARCE.

BRUNNHOF, Giovanni de Brignoli Di.

See: Brignoli De Brunnhoff, Giovanni De.



BRÜNNICH

BRÜNNICH, Morten Thrane. (BORN: Copenhagen, Denmark, 30 September 1737; DIED: Copenhagen, Denmark, 19 September 1827) *Danish naturalist & mining expert.*

Brünnich was a professor of economics and natural history at the University of Copenhagen. Then he became chief mining official in Norway and director of the Kongsberg silver mines. In 1814, he returned to Copenhagen where he lived out the remainder of his life. Brünnich was a member of the Kongelige Danske Videnskabernes Selskab [Royal Danish Scientific Academy].

REFERENCES: Cleavelly, *World Palæontological Collections*, 1983: 70. • *Dansk Biografisk Lexikon*: 4, 276-8 [by A. Quenstedt]. • Garboe, *Geologiens Historie i Danmark*,

1959-61: 1, 144-57, portrait. • Garboe, Axel., “Morten Thrane Brünnich og hans fossil samlinger,” *Meddelelser fra Dansk Geologisk Forening*, 15 (1963), pt. 2, 212-21, figs. 1-6. • Gilbert, *Deceased Entomologists*, 1977: 51. • Henriksen, K.L., “?,” *Entomologiske Meddelelser*, 15 (1921), 41-7, portrait. • Lambrecht & Quenstedt, *Catalogus*, 1938: 64. • Nyerup, R., *Morten Thrane Brünnich, Naturvidenskabens Senior i Danmark. Et biographisk Omrids som Program til Jubilæet den 29 de September 1819*. Copenhagen, 1819. 8°: 29, [2] p. • Poggendorff: 1, cols. 315-6. • Sarjeant, *Geologists*, 1980: 2, 639. • SBA: Scandinavian Biographical Archive: A-43, 386-395; A-43, 397-402. • WBI. • Wilson, *History of Mineral Collecting*, 1994. • Worm, *Forsøg til et Lexicon over Danske*, 1771-84.

908. — Danish, 1777.

Forsøg til mineralogie for Norge ved professor M. Th. Brünnich. Et pris-skrift belønnet formedelst hans kongel. høyheds arve-prinsens gavmildhed af det kongel. Norske Videnskabers Selskab og paa dets bekostning udgivet til almindelig brug. Trondheim, Trykt hos Jens Christensen Winding, 1777.

8°: [2], 96 p.

VERY RARE. This prize winning essay was published at the expense of Royal Norwegian Society of Science [get real name].

Facsimile reprint, 1977: *Forsøg til Mineralogie for Norge*. Trondheim, 1977. 8°: 96 p. [Published in an edition of 1000 as *Facsimilia Scientia et Technica Norvegica*, no. 41.]

REFERENCES: Cobres, *Deliciae Cobresianæ*, 1782: 2, 712. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 48. • LKG: XII 72*. • Pettersen, *Norsk Boglexikon*, 1972-4: 1, 56. • Roller & Goodman, *Catalogue*, 1976: 1, 175.

909. — Danish, 1777 [First edition].

Mineralogie. | [double rule] | Afhandlende | Egenskaber og Brug | af | Jord- og Steenarter, Salter, mineralske | brændlige Legemer og Metaller. | [rule] | Forsattet | af | M. Th. Brünnich. | [double rule] | Kiøbenhavn, 1777. | Trykt med Simmelkiær's Skrifter.

8°:)(8 2)(4 A-U8 χ^1 : 173 ℓ .; [i]-xxiv, [1]-320, [1] errata, [1] blank p. PAGE SIZE: 189 x 115 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], “Til kronprintsens.”; [iv], Blank.; [v]-[vi], “Naadigste kronprints og Herre!”; [vii]-xiv, “Til Læseren.”—list of references on pages xii-xiv (13 entries); [xv]-xx, “Indledning.”; [xxi]-xxiv, “Indlednings Table.”; [1]-121, “Første Klasse ... Jord- og Steen-Arten (Terræ et Lapides).”; 122-166, “Anden Klasse ... Salter, (Salia).”; 167-178, “Tredie Klasse ... Mineralske Brændlige Legemer, (Inflammabilia Mineralia).”; 179-308, “Fierde Klasse ... Metaller, (Metalla).”; 309-312, “Femte Klasse ... Forsteeninger, (Petrificata).”; [313]-320, “Dansk Register.”; [1 pg], Errata, “Trykseil og Kettelser.”; [1 pg], Blank.

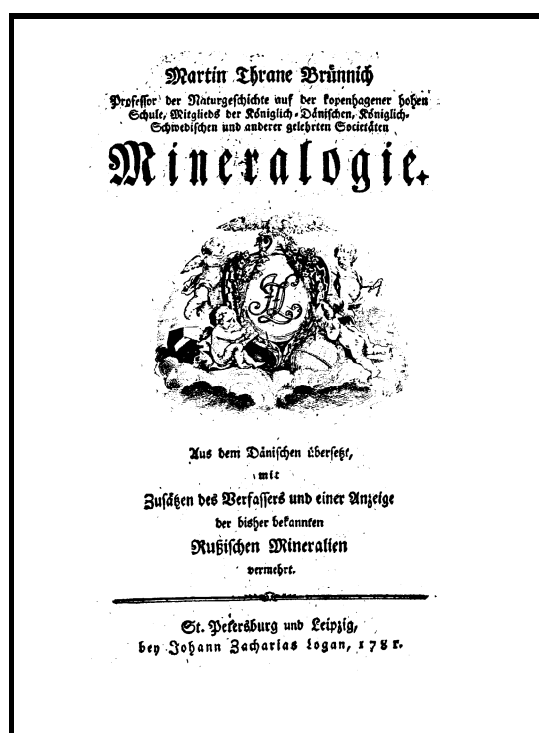
RARE. This is the author's complete introduction to mineralogy. It emulates the work of Johan Gotschalk Wallerius [q.v.] upon which it is based by including in the species descriptions notes on synonymes, hardness, physical appearance, origins, and uses. In addition, every mineral listed has a reference to Wallerius' system as presented in *Systema Mineralogicum* (1st ed., Holmiæ, 1772-5). Brünnich adopts a classification system founded on chemical principles that provides

BRÜNNICH

a good foundation for the logical organization of the species.

The preliminaries of the work include a short passage on why this work should be used, a list of literature cited, and a general introduction to mineralogical science covering some definitions and general remarks. The text then presents the classification of the mineral species. This systematic portion is divided into five classes: (1) earths and stones, (2) salts, (3) flammable substances, like pitch and amber, (4) metals and (5) petrifications. An index in Danish to the mineral names and a page of errata conclude the work.

REFERENCES: BL: [990.f.14.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 48. • Roller & Goodman, *Catalogue*, 1976: 1, 175.



MINERALOGIE, 1781

910. German transl., 1781: Martin Thrane Brünnich | [...3 lines of titles and memberships...] | Mineralogie. | [ornament] | Aus dem Dänischen übersezt, | mit | Zusätzen des Verfassers und einer Anzeige | der bisher bekannten | Rußischen Mineralien | vermehrt. | [ornate rule] | St. Petersburg und Leipzig, | bey Johann Zacharias Logan, 1781.

8°: π⁸ A-X⁸ Y⁶ **2; 184ℓ.; [16], [1]-347, [5] p., title vignette. PAGE SIZE: 192 x 116 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "An den Leser"—signed, "Der Verfasser," 14 September 1777.; [4 pgs], "Vorrede des Uebersetzers"—signed Joh. Gottl. Georgi, 12-23 October 1780.; [4 pgs], "Einleitung."; [1]-328, Text.; 329-347, "Register."; [1 pg], Blank.; [4 pg], "Einleitungstabelle."

VERY SCARCE. Translated by Johann Gottlieb Georgi [see note below] from *Mineralogie* (Kjøbenhavn, 1777). This

edition contains for the additional species and a notice of hitherto unknown Russian minerals by the translator, who spent many years in Russia making numerous mineralogical expeditions.

The preliminaries include Brünnich's letter to the reader, a forward from the translator and a short introduction. The translation of the text is presented, concluding with a species index and an overview of the classification system.

Johann Gottlieb Georgi. (BORN: Gut Wachholzhausen, Pommern, Germany, 31 December 1729; DIED: St. Petersburg, Russia, 27 October 1802) *German apothecary*. Georgi established an apothecary in Stendal, but moved his establishment in 1770 to St. Petersburg. Using this as a home base he made many explorations in the Russian territory. In 1783, he was elected a member of the Academy of Science in St. Petersburg.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 51, 451. • Beckmann P.O.B.: 11, 581. • BL: [953.c.5.]. • Cobres, *Deliciae Cobresianæ*, 1782: 2, 712. • Fischer, *Mineralogie in Sachsen*, 1939: 310. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 48-9. • LKG: XII 73a. • Roller & Goodman, *Catalogue*, 1976: 1, 175. (Georgi) ADB: 8, 713-4. • Berg, *Russischen Geographischen Entdeckungen*, 1954: 261-3. • *Catalogue of Portraits of Naturalists*: 473 [1 portrait listed]. • DBA: I 380, 385-391; II 439, 160-161. • *Deutsche Apotheker Biographie*: 1, 198-200. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • *Great Soviet Encyclopedia*: portrait. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Moliavko, *Geologi Biograficheskii*, 1985: p. 75. • NDB: 6, 242-3. • Poggendorff: 1, col. 876. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: p. 119. • Walden, P., "Der Apotheker als Kulturträger," *Pharmaz. Zeitung*, 75 (1930), 1323-?? • WBI.

911. — French, 1783 [Bibliography].

M. T. Brünnichii ... *Literatura Danica scientiarum naturalium, qua comprehenduntur I. Les Progrès de l'histoire naturelle en Dannemarc & en Norvège.* (Traduit du danois par N. J. A. Yanssens des Campeaux.) Fr. II. *Bibliotheca patria autorum & scriptorum, scientias naturales tractantium.* Lat. Hafniæ & Lipsiæ, 1783.

2 parts. [Part 1] 8°: [2], 124 p. [Part 2] 8°: 242, xiv, [16] p.

VERY SCARCE. Lists c2000 entries relevant to the natural history of Denmark and Norway, including titles in geology, mineralogy and paleontology. The second part provides a chronological listing of the entries.

REFERENCES: Besterman, *Bibliography of Bibliographies*, 1965-6: col. 4157. • BL: [B.553.(1.)]. • LKG: XIV 15. • Margerie, *Bibliographies Géologiques*, 1896: no. 2762. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 534. • Roller & Goodman, *Catalogue*, 1976: 1, 175.

912. — Latin, 1793 [Library catalog].

Catalogus | Bibliothecæ | Historiæ Naturalis, | Libris | Præsertim Ad Regnum Animale | Et Lapidum | Spectantibus Instructæ. | Qui Auctione Publica | Die Mensis Juill 1793 | In Ædibus Communitatis Regiæ Universitatie | Havntensis Vendentur. | [ornate rule] | Havniæ | Typis Johannis Friderici Schuldiæ | Aulæ Et Universitatis Typographi.

8°: [1]-78 p.

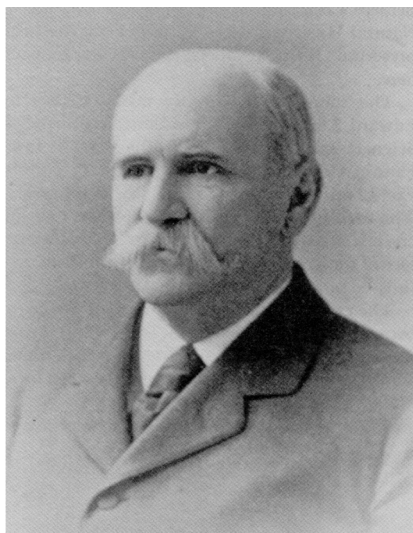
VERY RARE. This is the auction sale catalog of

Brünnich's library that occurred in July 1793. It was a collection of natural history books with extensive sections in animals and minerals.

REFERENCES: BL: [B.601.(1.)]. • Bridson, *History of Natural History*, 1994: no. Bc579. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 550.

Cronstedts Versuch einer Mineralogie. Vermehrt durch Brünnich. (Copenhagen und Leipzig, 1770).

See: Cronstedt, Axel Fredrik.



BRUSH

BRUSH, George Jarvis. (BORN: Brooklyn, New York, U.S.A., 15 December 1831; DIED: New Haven, Connecticut, U.S.A., 6 February 1912) *American mineralogist & university administrator.*

Brush graduated from Yale in 1852. Having decided upon a career in mineralogy and chemistry, he traveled to Freiberg, enrolling at the Bergakademie in 1853. There he was instructed by J.F. BREITHAUPT, who stimulated his already intense interest in the composition of minerals. Upon his return to America, Brush was made an assistant in chemistry at the University of Virginia. However, this was followed soon after by an appointment as professor of metallurgy at Yale University, a post he held from 1855 to 1871. In 1868, he happily added the title of professor of mineralogy, an appointment he retained throughout his subsequent positions until his retirement in 1898. He became director of the Sheffield Scientific School in 1872 and as administrator showed a gift for the position. Even with his time stretched running the school, Brush still found time to teach his favorite subject of mineralogy to new pupils. Throughout his life he amassed a fine personal collection of over 15,000 mineral specimens, which was bequeathed to the Yale Peabody Museum. In 1983, the family donated a large accumulation of Brush letters and mementos to Yale University. Included in the collection are a large number of letters from important mineralogists.

REFERENCES: ABA: I 205, 398-412; II 74, 67-68. • *American Chemists & Chemical Engineers*: 2, 34-5 [by W.D. Miles]. • *American Journal of Science*: Series 4, 33 (1912), 389-96 [by E.S. Dana]. • Barr, *Index to Biographical Fragments*, 1973: 37. • Cleavelly, *World Palaeontological Collections*, 1983: 70. • DAB: 2, pt. 1, 187-8. • Elliott, *Biographical Index*, 1990: 31. • Elliott, *Biographical Dictionary*, 1979: 44. • Fruton, *Bio-Bibliography*, 1982:

102. • *Mineralogical Magazine*: 16 (1913), 379. • Penfield, S.L. and L.V. Pirsson, *Contributions to Mineralogy and Petrography from the Laboratories of the Sheffield Scientific School of Yale University*. New York, Charles Scribner's Sons, 1901. [i]-xii, [1]-482 p., index, biblio. • Poggendorff: 3, 208 & 4, 197 & 5, 179. • *Proceedings of the American Academy of Arts & Sciences*: 51 (1916), 853-7. • *Quarterly Journal of Geological Society of London*: 69 (1913), liv-lv. • Sarjeant, *Geologists*, 1980: 2, 640. • *Science*: 35 (1912), 213, 409-11. • WBI. • *World Who's Who in Science*: 292. • WWAH: 78.

Fifth Edition System Appendix

913. — English, 1872 [5th edition, first appendix].

First Appendix | To The | Fifth Edition | Of | Dana's Mineralogy, | by | George J. Brush, | Professor Of Mineralogy In The Sheffield Scientific School Of Yale College. | Completing The Work To 1872. | New York: John Wiley & Sons, | 15 Astor Place. | 1872.

8°: [i]-iv, [1]-19, [1] p., illus. PAGE SIZE: 232 x 145 mm.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1872, by | John Wiley & Son, ..."; [iii]-iv, "Prefactory Note."; [1-19], Text.; [1 pg], Blank.

SCARCE. This first appendix prepared for JAMES DWIGHT DANA's *System of Mineralogy* (5th ed., New York, 1868) contains descriptions for eighty-seven minerals proposed as new since the publication of the that work. In addition, it contains new information about some older mineral species. Each new mineral is given a Dana number showing its place in the system.

REFERENCES: NUC.

914. 5th edition, first appendix, 1873: Appendix | To The | Fifth Edition | Of | Dana's Mineralogy, | By | George J. Brush, | Professor Of Mineralogy In The Sheffield Scientific School Of Yale College. | [rule] | New York: | John Wiley & Son, | 15 Astor Place. | 1873.

8°: [i]-iv, [1]-18 p. PAGE SIZE: 232 x 143 mm.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1872, by | John Wiley & Son, | ..."; [iii]-iv, "Prefactory Note."; [1]-18, Text.

SCARCE. A reset issue of the first appendix to the fifth edition of Dana's *System* (New York, 1868) which has kept the four preliminary pages unaltered, but has reset the text to now exist in 18 pages instead of the original 19 by the elimination of all illustrations. This particular issue of the appendix appears to only exist bound up with the 1874 London issue of Dana's fifth edition.

915. — English, 1875 [First edition].

Manual | Of | Determinative Mineralogy | With An Introduction | On | Blow-Pipe Analysis. | By | George J. Brush, | Professor Of Mineralogy In The Sheffield School. | [ornate rule] | New York: | John Wiley & Son, | 15 Astor Place. | 1875.

8°: [i]-iv, [2] contents, [1]-104 p., pages 63 to 96 are printed as folding double-leaf tables, 25 illus., index. PAGE SIZE: 222 x 136 mm.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1874, by | Geo. J. Brush, | ..."; [iii]-iv, "Preface."—dated 15 December 1874; [2 pgs], "Table Of Contents."; [1]-12, "I. Apparatus and Reagents."; [13]-32, "II. Systematic Course of Blowpipe Analysis."; [33]-56, "III. Alphabetical List of

BUC'HOZ

Elements and Compounds with Characteristic Blowpipe and other Reactions.”; [57]-96, “IV. Determinative Mineral,” containing “Tables for the Determination of Mineral Species by Means of simple chemical experiments in the wet and dry way. | Translated from the tenth edition of Franz von Kobell’s “Tafeln zur Bestimmung der Mineralien.”; [97]-104, “Index To Minerals | in | Chapter IV.”

SCARCE. This is one of the best textbooks on the subject of determinative mineralogy using the blowpipe. It was intended, in accordance with an original plan between JAMES DWIGHT DANA and Brush to be the Determinative Part of Dana’s *System of Mineralogy* (5th ed., New York, 1868), for which Brush had contributed the pyrognostic material. Certainly, from its first issue it is was the mostly widely used text on the subject within American universities and colleges. The author calls this work a compilation based on the tenth edition of Von Kobell’s *Tafeln zur Bestimmung der Mineralien* (München, 1873). While this is true, Brush also added extensively from his own vast experience of blow-pipe reactions in minerals. Moreover, in inspired innovation, the species, with their blowpipe characters, are arranged in a series of extended tables, which when used properly lead the student to the name of the mineral that was being examined based upon the reactions observed. These tables include all species known to the time of publication.

REFERENCES: *American Journal of Science*: 3rd Series, 9 (1875), 153. • Dana’s 7th (Bibliography): 68. • NUC: 81, 141-3 [NB 0896953 & NB 0896969].

916. 15th edition, 1898: Manual | Of | Determinative Mineralogy. | With An Introduction On | Blowpipe Analysis. | By George J. Brush, | Director of the Sheffield Scientific School of Yale University. | Revised And Enlarged, With Entirely New Tables | For The Identification Of Minerals. | By | Samuel L. Penfield, | Professor of Mineralogy in the Sheffield Scientific School | of Yale University. | Fifteenth Edition. | First Thousand. | New York: | John Wiley & Sons. | London: Chapman & Hall, Limited. | 1898.

8°: [i]-x, [1]-312 p., illus., tables.

SCARCE. Co-authored with SAMUEL L. PENFIELD. Although the title page proclaims this the fifteenth edition, it is in fact a major revision to Brush’s original work. The consequence being this is the finest textbook on the use of the blow-pipe ever written in the English language.

REFERENCES: Dana’s 7th (Bibliography): 68.

BUC’HOZ, Pierre Joseph. (BORN: Metz, France, 27 January 1731; DIED: Paris, France, 30 January 1807) *French botanist & naturalist.*

Buc’hoz was the son of Pierre Brughant, Bourgeois of Metz. He was persuaded to follow his father’s profession and he embarked on a career to practice law. However, Buc’hoz did not find the profession agreeable and instead moved to Nancy where he took up the study of medicine, graduating on February 22, 1763. He was appointed physician ordinary to King Stanislas of Poland, but was accused of not fulfilling his duties and quit to devote his full energy to the study of botany. He collaborated on the founding of the Jardin des Plantes at Nancy, and for twelve years co-edited a newspaper on agriculture.

Buc’hoz eventually settled in Paris where he made a living by preparing many illustrated works about the three realms of natural history. In 1788, to mend his finances, Buc’hoz sold at auction his large library concerned with natural history.^[1] He petitioned the French government for a pension, and to support his claim he published a

bibliography of his own works, *Dissertation en forme de catalogue des différents travaux de J.-P. Buchoz dans la carrière botanique pendant plus de cinquante ans.* (Paris, 1794). Buc’hoz held membership in the academies of Metz, Nancy, d’Angers, Béziers, Bordeaux, Châlons-Saint Marne, Lyon, Rouen and Mayence.

Buc’hoz was a prolific author, who on the title pages of his many publications, usually reversed his christian names [i.e. Joseph Pierre, not Pierre Joseph]. However, his writings in science and natural history developed a bad reputation owing to their inaccuracies and the incomplete understanding of the author about the subjects. This has caused Buc’hoz to be labeled the Sir JOHN HILL of France. Buc’hoz’ reputation today is perhaps best summed up in the Hunt Catalog: “Buc’hoz is not beloved of botanists, bibliographer’s or collectors of prints. He has a maddening way of using the same plates again and again and again, in book after book—sometimes colored, sometimes uncolored, sometimes badly colored, sometimes reversed, sometimes redrawn, sometimes with added details, sometimes with changes to nomenclature.” As can be seen from the descriptions of his mineralogical works, this is a fair assessment.

NOTES: [1] Bure, G. de, *Catalogue des livres de la bibliothèque de M. [Pierre-Joseph] Buc’hoz, disposé et mis en ordre.* Paris, G. de Bure, 1778. [8°: xvi, 212 p.; catalogues 1,786 lots with author index].

REFERENCES: ABF: I 164, 409-422, II 107, 438. • Bégin, *Biographie de la Moselle*, 1829-32: 1, 177. • Bridson, *History of Natural History*, 1994: no. Bc529. • *Biographie Universelle*: 6, 98-9. • *Bulletin de la Société d’histoire naturelle de la Moselle*: 1932. • DBF: 7, col. 605-6 [by J. Feller]. • Feller, *Biographie Universelle*, 1851. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 751. • Hunt Botanical Catalog: 2, 416-20, no. 656. • *Nouvelle Biographie Générale* (Hoefer): 7, 706. • Poggendorff: 1, cols. 330-1. • *Revue Encyclopédique* [by Deleuze]. • WBI.

917. — French, 1769 [First edition].

Vallerius | Lotharingæ, | Ou | Catalogue | Des Mines, Terres, | Fossiles, Sables Et Cailloux | qu’on trouve | Dans La Lorraine | Et Les Trois Évêchés; | Ensemble leurs propriétés dans la Médecine & | & dans les Arts & Métiers. | Par M. Pierre-Joseph Buc’hoz, Médecin, Botaniste | [...2 lines of titles and memberships...] | [ornament] | A Nancy, | Chez C.S. Lamort, Imprimeur, près des | RR. PP. Dominicains. | Se vend à Paris, | Chez Durand, Neveu, rue S. Jacques, à | la Sagesse. | [rule] | Avec Approbation Et Permission.

8°: [i]-vii, [1], [1]-382, [6] p.

CONTENTS: [i-ii], Title page, verso blank.; [iii], “Urbi Metensi.”; [iv], Blank.; v-vii, “Préface.”; [1 pg], Blank.; [1]-382, Text.; [6 pgs], Publisher’s list.

RARE. This is a catalogue of the mines, stones, fossils, sands and such found in the region of Lorraine in France, together with their uses in medicine, arts and the trades.

Reissue, 1771: Nancy, C.-S. Lamart, 1771. Apparently identical to the 1769 edition.

REFERENCES: *Berlinische Sammlungen*: 3, 650-1. • BL: [233.b.41.]. • CBN: 20, col. 1147-75. • *Journal des Savans*: May, 1769, 568. • LKG: XIV 374. • NUC: 82, 103-8 [NB 0914253].

918. — French, 1770.

Lettres hebdomadaires sur l’utilité des minéraux

dans la société civile pour servir de suite aux lettres sur les animaux & les végétaux par M. Pierre-Joseph Buc'hoz ... Paris, Durand neveu, 1770.

2 vols. [VOL 1] 4°: 413, [3] p. (p. 33 misnumbered 37). [VOL 2] 410, [4] p. (p. 3 misnumbered 5.)

VERY SCARCE. Incorporated with other natural history writings and reissued under the title, *La Nature Considérée sous ses différents aspects* (8 vols., Paris, 1771–83).

REFERENCES: *Berlinische Sammlungen*: 3, 656-7. • Bolton, *Catalogue of Periodicals*, 1897: no. 2691. • CBN: 20, 1147-75. • *Journal encyclopédique*: 4 (1770), 298. • NUC: 82, 103-8 [NB 0914192].

919. — French, 1771-83 [Periodical].

La Nature | Considérée | Sous Ses Différens Aspects, | Ou | Lettres | Sur Les Animaux, Les Végétaux | Et Les Minéraux. | Contenant des observations intéressantes sur | l'Histoire Naturelle, les Mœurs & les caractères | des Animaux, sur la Minéralogie, la Boranique, & c. & un détail de leurs différens usages | dans l'économie domestique & rurale. | [rule] | Ouvrage Périodique. | [ornate rule] | Tome Premier. | [ornate rule] | A Paris, | Chez J.P. Costard, Libraire, rue | Saint-Jean-de-Beauvais. | [ornate rule] | M. DCC. LXXI. | Avec Approbation & Privilège du Roi.

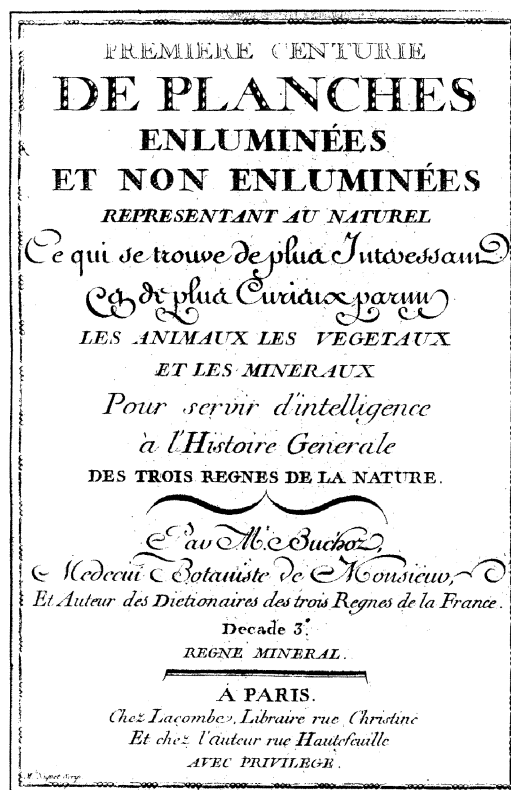
8 vols.

VERY SCARCE. According to Bolton (1897) this is a reissue of three previous works of Buc'hoz. It contains: *Lettres Périodiques sur la Méthode ... Végétaux* (5 vols., Paris 1768–70), *Lettres Périodiques, curieuses, utiles et intéressantes, sur les avantages que la société Économique* (4 vols., Paris, 1769–70) and *Lettres Hebdomadaires sur l'utilité des Minéraux dans la société civile* (2 vols., Paris 1770). It was continued under the title: *La Nature considérée sous ses différents aspects, ou lettres sur les animaux, les végétaux et les minéraux. Par l'Abbé Bertholon et Boyer* (9 vols., Paris, 1787–89).

REFERENCES: BL: [957.g.5-12.]. • Bolton, *Catalogue of Periodicals*, 1897: no. 2691. • CBN: 20, col. 1147-75. • LKG: VI 48.

920. — French, 1778-81 [First edition].

[Engraved title printed in red and contained within a ornate double ruled box:] *Première Centurie | De Planches | Enluminées Et Non Enluminées | Representant Au Naturel | Ce qui de trouve | de plus Intéressant et de plus Curieux | parmi | Les Animaux Les Vegetaux | Et Les Minéraux, | Pour servir d'intelligence | à l'Histoire Generale | Des Trois Regnes De La Nature. | Par M. Buc'hoz, Medecin Botaniste de Monsieur | Et Auteur des Dictionnaires des trois Regne de la France. | Decade 1^{re}. | Regne Animal. | [ornate rule] | A Paris. | Chez Lacombe, Libraire rue Christine. | Et chez l'Auteur rue Hautefeuille. | Avec Privilege.*



PREMIER CENTURIE DE PLANCHES, 1778

| Mlle. Niquet, Scrip.

[TITLE PAGE OF SECOND VOLUME READS:]

[Engraved title printed in red and contained within a ornate double ruled box:] *Seconde Centurie | De Planches | Enluminées | Et Non Enluminées | Representant Au Naturel | Ce qui de trouve | de plus Intéressant et de plus Curieux | parmi | Les Animaux, Les Vegetaux, Et Les Minéraux, | Pour servir | d'intelligence à l'Histoire Generale | Des Trois Regnes De La Nature. | Par M. Buc'hoz | Medecin Botaniste de Monsieur. | Et Auteur des Dictionnaires des trois Regne de la France. | Decade 1^{re}. | Regne Animal. | A Amsterdam. | Chez Marc-Michel Rey, Libraire. | 1778.*

2 vols. Folio, consisting of a total of 20 suites of plates, each with an engraved title page, engraved table of contents, and 10 subjects each in uncolored and colored impression. These plates are divided into "centurie" of 100 subjects per volume for a total of 200 plates (colored and uncolored), making together 400 plates between the two vols. This remarkable work has no general title page; however, each "decade" or livraison has its own engraved title page, which varies in minor detail and color from one decade to another. The titles transcribed above being the title pages from the first "decade" of the first "centurie," which dealt

BUC'HOZ

with the animal kingdom. PAGE SIZE: 505 x 335 mm.

RARE. A little known, finely illustrated natural history covering the three realms of plants, animals and minerals. It is one of the best known works of the prolific Buc'hoz, and because of the author's reuse of the plates in later works, a difficult bibliographic problem. The work contains no text, but consists of a series of plates in royal folio. On unstated evidence, both Brunet and the BMC date the work "(1775) 1778–1781." Since no "decade" of the first volume contains any date, there is no direct reason for dating the first volume in 1775; however, the decades of the second volume are dated Amsterdam, 1778 (nos. 1–3); Paris, 1778 (no. 4); Amsterdam, 1779 (no. 5) and 1780 (no. 6); Paris, 1780 (nos. 7, 8); and Paris, 1781 (nos. 9, 10).

Premier [–Seconde] Centurie des Planches appears to be the first appearance of any portion of the work as it relates to mineralogy. Complete copies of the book are usually bound in 2 volumes, each covering 100 subjects or one "centurie." It is from this grouping that the designation of Premier or Seconde Centurie as used in the title is derived. The two volumes contain 20 suites of large folio engraved plates, each with an engraved title page (most printed in colors other than black), an engraved table of contents and plates illustrating 10 subjects. Each of the subjects is present in both uncolored and hand-colored impression making the complete 2 volume work total 400 plates (200 uncolored plates of subjects, 200 colored).

Each "decade" is devoted to a natural kingdom—animal, vegetable or mineral, in that order—each volume thus having "decades" 1, 4, 7 and 10 devoted to animals, 2, 5, and 8 to plants, and 3, 6, and 9 to minerals and fossils. Therefore, within this work there are 80 different plates (in both colored and uncolored state) depicting animals, and 60 each showing plants and minerals. As there is essentially no accompanying text, the merits of this book must rest on the quality of the illustrations, and although sometimes crude they are among the finest colored illustrations of minerals created in the eighteenth century.

Unreserved praise must go to the numerous artists who designed Buc'hoz' plates [see notes below]. Greatest among these was Jean Baptiste Desmoulins. Buc'hoz was also fortunate in retaining several of the foremost engravers of the times such as C. Bacquoy, Dupin fils and C. Fessard. These artisans and others engraved and magnificently hand-colored the plates of this work. In fact it is reported that after he became a widower, Buc'hoz married one of the lady colorists who had worked on this book. It can also be observed that a number of the mineralogical specimens illustrated have been copied directly from the works of other authors like KNORR and SCHMIEDEL.

Claude Mathieu Fessard. (BORN: Fontainebleau, France, 1740; DIED: Paris, France, After 1803) *French engraver & etcher.* Fessard was a student of the great French artist Joseph de Longueil [1730–1792]. He travelled to England in 1765 to expand his experience, after which he illustrated several books of voyages and travels, including P.S. Pallas' *Voyage en Russie* (Paris, 1788–93). Fessard

signed his work "Fessard jeune" in order to distinguish it from the engravings of Etienne Fessard [1714–1777].

Jean Victor Dupin. (BORN: Paris, France, 1718; DIED: Paris, France?,) *French engraver.* Dupin was the son of the renowned engraver Pierre Dupin [1690–1755?], with whom he worked in his early career. Jean Victor usually signed his work "Dupin fils."

Jean Baptiste Desmoulins. (BORN: Paris, France, 1740; DIED:) *French engraver.* French copper engraver who worked in Paris and collaborated with Abbé de Saint–Non.

Jean Charles Baquoy. (BORN: Paris, France, 16 June 1721; DIED: Paris, France, 24 February 1777) *French engraver.* French copper engraver who signed his work C. Baquoy and belongs to the greatest vignette engravers of the eighteenth century.

REFERENCES: Brunet: 1, col. 1371. • CBN: 20, col. 1147–75. • *Freilich Sale Catalog*: no. 106. • Mengel, *Catalogue of the Ellis Collection*, 1972–83: 1, 228–9, no. 406. • Nissen (ZBI): no. 651. • NUC: 82, 103–8 [NB 0914223]. (Fessard) Thieme & Becker, *Allgemeines Lexikon*, 1907–50: 11, 504. (Dupin) Thieme & Becker, *Allgemeines Lexikon*, 1907–50: 10, 156. (Desmoulins) Thieme & Becker, *Allgemeines Lexikon*, 1907–50: 9, 139. (Baquoy) Thieme & Becker, *Allgemeines Lexikon*, 1907–50: 2, 450.

921. 2nd edition, 1778–82: *Collection de Planches Représentant au Naturel Ce qui se trouve de plus Intéressant et de plus Curieux parmi les Animaux, les Végétaux, et les Minéraux, Pour servir à l'intelligence de l'Histoire Générale des trois Regnes de la Nature.* Paris, Durand neveu, 1778–1782.

2 vols. Engraved title page in each volume, 20 suites, each with an engraved title page, engraved table of contents, and 10 subjects each in uncolored and colored impression (together, 400 plates of subjects).

RARE. Almost identical in content to the first appearance, titled: *Premier [–Seconde] Centurie des Planches* (Paris, [1775]–1781), which is described above. The difference being the addition of an engraved general title page in each volume.

REFERENCES: BL: [1819.c.4.]. • CBN: 20, col. 1147–75. • NUC: 82, 103–8 [NB 0914142].

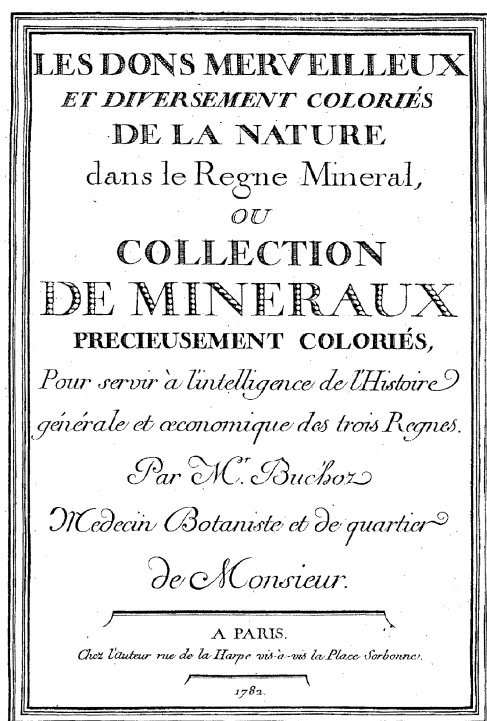
922. — French, 1782–97.

[Engraved title within a multibordered box:] *Les Dons Merveilleux | Et Diversement Coloriés | De La Nature | dans le Regne Mineral, | Ou | Collection | De Minéraux | Precieusement Coloriés, | Pour servir à l'intelligence de l'Histoire | générale et œconomique des trois Regnes. | Par M^r. Buc'hoz | Medecin Botaniste et de quartier | de Monsieur | [ornate rule] | A Paris. | Chez l'Auteur rue de la Harpe vis-à-vis la Place Sorbonne. | [ornate rule] | 1782.*

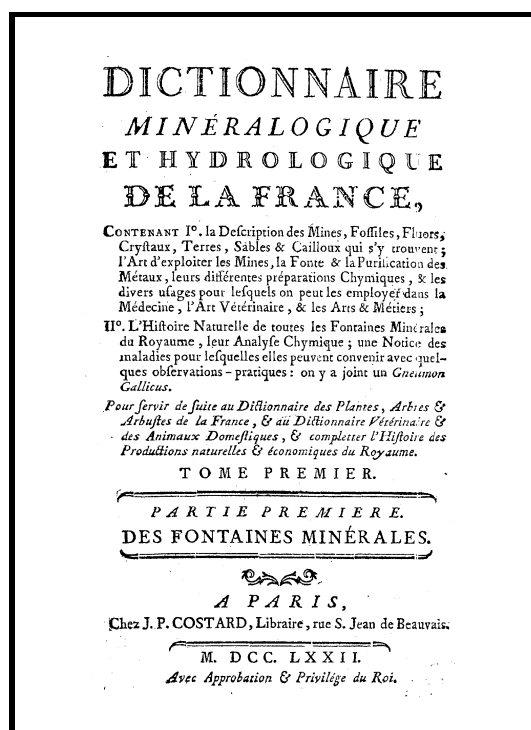
2°: [2] p., 100 hand-colored plates, [8] p. PAGE SIZE: 410 x 250 mm.

CONTENTS: [2 pgs], Engraved title page, verso blank.; 100 hand-colored plates.; [7 pgs], "Explication | Des Planches.; [1 pg], Blank.

VERY RARE. *Les Dons Merveilleux ... Regne Minéral* is a marvelously illustrated work focused on mineralogical subjects. Is a reissue of the sixty colored plates first published in 1775–81 in *Première [–Seconde] Centurie des Planches* (2 vols., Paris, 1775–81), together with forty additional plates that appear for the first time. Although it is in the same style of the previous work and consists primarily of plates of illustrations, the large number of additional plates show that this volume



LES DON'S MERVEILLEUX, 1782



DICTIONNAIRE MINÉRALOGIQUE, 1772

should be considered a separate, new work.

Brunet dates this work as "1782-97," which indicates the work was issued in a series of parts. However, no direct evidence has been uncovered to support this contention. Although it would seem likely that Buc'hoz would have sold this work through a subscription system by periodically preparing additional plates for the book, no wrappers, advertisements or other evidence has been found. Only circumstantial support comes from a relatively large number of copies of this work being described as having fewer than 100 plates; that number usually being 88. In addition, the last 40 plates are new, with no indication of "Decade." Instead, each plate although unnumbered, has in its upper right-hand corner a "Pl." designation.

REFERENCES: Brunet: 1, col. 1371. • CBN: 20, col. 1147-75. • Hunt Botanical Catalog: no. 656 [describes the botanical twin to this mineralogical volume, but the comments were useful in directing the commentary]. • LKG: VI 49a. • NUC: 82, 103-8 [NB 0914170]. • Roller & Goodman, *Catalogue*, 1976: 1, 180. • Wellcome Catalog (Books): 2, 264.

923. — French, 1772-6 [First edition].

Dictionnaire | Minéralogique | Et Hydrologique | De La France, | Contenant I°. la Description des Mines, Fossiles, Fluors, | Crystaux, Terres, Sables & Cailloux qui s'y trouvent; | l'Art d'exploiter les Mines, la Fonte & la Purification des | Métaux, leurs différentes préparations Chymiques, & les | divers usages pour lesquels on peut les employer

dans la | Médecine, l'Art Vétérinaire, & les Arts & Métiers; | II°. L'Histoire Naturelle de toutes les Fontaines Minérales | du Royaume, leur Analyse Chymique; une Notice des | maladies pour lesquelles elles peuvent convenir avec quelques observations-pratiques: on y a joint un Gneumon | Gallitus. | Pour servir de suite au Dictionnaire des Plantes, Arbres & | Arbustes de la France, & au Dictionnaire Vétérinaire & | des Animaux Domestiques, & compléter l'Histoire des | Productions naturelles & économiques du Royaume. | Tome Premier. | [ornate rule] Partie Premiere. | Des Fontaines Minérales. | [ornate rule] | [ornament] A Paris, | Chez J. P. Costard, Libraire, rue S. Jean de Beauvais. | [ornate rule] M. DCC. LXXII. | Avec Approbation & Privilège du Roi.

4 vols. [VOL 1] 8°: [2], vi, xvi, 635, [1] p. [VOL 2] 8°: 520, clxiv p. [VOL 3] 8°: [2], xii, [5]-638 p. [VOL 4] 8°: [4], 710, [2] p. Vol. 4 published by Brunet. "Epître" signed Buc'hoz.

VERY SCARCE. 1. ptie., t. 1-2. Des fontaines minérales – 2. ptie., t. 3-4. Des mines et fossiles.

Mineralogy – France. Mineral waters – France.

REFERENCES: BL: [1568/7058.]. • LKG: XIV 332 & XIV 339. • NUC: 82, 103-8 [NB 0914146]. • Roller & Goodman, *Catalogue*, 1976: 1, 180.

924. 2nd edition, 1785: Dictionnaire | Minéralogique | Et | Hydrologique, | Contenant I°. la Description des Mines, Fossiles Fluors, | Crystaux, Terres, Sables & Cailloux;

BUC'HOZ

l'Art d'exploiter | les Mines, la Fontè & la purification des Métaux, leurs | différentes préparations chymiques, & les divers usages | pour lesquels ou peut les employer dans la Médecine, | l'Art Vétérinaire, & les Arts & Métiers. | II° L'Histoire Naturelle de toutes les Fontaines Minérales | de la France, leur Analyse chymique; une Notice des | maladies pour lesquelles elles peüvent convenir, avec | quelques observations-pratiques; ou y a joint un | Gneumon Gallicus. | Ouvrage nécessaire à tous ceux qui veulent étudier | l'Histoire naturelle. | Tome Premier. | [rule] | Fontaines Minérales. | [rule] | Les 4 volumes in 8°. rel. 18 liv. | [ornament] | A Paris | Du fonds de Gogüf. | Chez [The next 4 lines braced on the left by a {:] Volland, Libraire, quai des Augustins, près | la rue du Hurepoix. | Royez, quai des Augustins, à la descente | du Pont-Neuf. | [ornate rule] | M. DCC. LXXXV. | Avec Approbation, & Privilège du Roi.

4 vols. VERY SCARCE.

REFERENCES: BL: [1507/1461.]. • CBN: 20, col. 1147-75. • LKG: XIV 332. • NUC: 82, 103-8 [NB 0914148].

925. — French, 1776.

Histoire Générale des Animaux, des Végétaux et des Minéraux qui se trouvent dans le Royaume, représentés en gravure ... avec l'explication aussi gravée au bas de chaque planche ... Introduction représentant les principaux costumes de France. Par M. Pierre-Joseph Buchoz, ... Paris: l'Auteur, 1776.

2°, engraved title page, double suite of engraved plates both colored and uncolored.

VERY SCARCE. Tome I contains an introduction to the history of the quadrupedes.

REFERENCES: CBN: 20, col. 1147-75. • LKG: XIV 332b*.

926. — French, 1778.

Histoire generale des animaux, des vegetaux et des minéraux qui se trouvent dansle royaume etc. Paris, 1778.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 332a*.

927. — French, 1782.

Les richesses de la France dans ses productions mineralogiques et hydrologiques par P.I. Buc'hoz. Paris, 1782.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 333c.

928. — French, 1789.

Dissertation en Forme de Préface sur les fossiles. Paris: l'Auteur, [1789].

2°: 2 p. VERY SCARCE.

REFERENCES: CBN: 20, col. 1147-75. • LKG: IX 17.

929. — French, 1790.

Catalogue Latin et Francais des differentes substances qui composent le Regne mineral de Lorraine etc. Paris, 1790.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 375a.

930. — French, 1790.

Dissertatio sur l'Histoire naturelle des environs de Pont a Mousson en Lorraine. Paris, 1790.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 376b.

931. — French, 1792.

Dissertatio sur l'Analyse de Valerius Lotharingiae et sur les branches de commerce qui peuvent resulter pour la Lorraine du regne mineral. Paris, 1792.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 377c.

932. — French, 1792.

Dissertatio sur le Cantal, montagne famguse de la haute Auvergne. Paris, 1792.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 358*.

933. — French, 1792.

Dissertation analytique sur le Dictionnaire minéralogique et hydrologique de la France. Par M. Buc'hoz ... Paris: Prévost et Barrois aîné, [1792].

2°: 2 p. VERY SCARCE.

REFERENCES: CBN: 20, col. 1147-75. • LKG: XIV 334d.

934. — French, 1798.

Dissertatio sur les Vosges, de meme que sur leurs productions naturelles et economiques. Paris, 1798.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 365*.



BUCH

BUCH, Christian Leopold von. (BORN: Stolpe, Germany, 25/26 April 1774; DIED: Berlin, Germany, 4 March 1853) *German geologist & mineralogist.*

Born into the privileged life of the aristocracy, Buch

... REFERENCES: ADB: 3, 464. • Barr, *Index to Biographical Fragments*, 1973: 38. • *Catalogue of Portraits of Naturalists*: 233 [2 portraits listed]. • Cleavelly, *World Palaeontological Collections*, 1983: 71. • DBA: I 155, 36-37; II 190, 396-402. • Drugulin, *Sechstausend Portraits*, 1863: nos. 713-5. • DSB: 2, 552-7 [by W. Nieuwenkamp]. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 1, 202. • Lambrecht & Quenstedt, *Catalogus*, 1938: 65. • NDB: 2, 697 [by W. Quenstedt]. • Poggendorff: 1, cols. 324-6. • Sarjeant, *Geologists*, 1980: 2, 645-7 & Suppl. 1 (1986), 1, 317-8. • WBI. • *World Who's Who in Science*: 1731.

935. — German, 1794.

Beobachtungen über den Kreuzstein. Leipzig, 1794.

8°: RARE.

REFERENCES: LKG: XVI 326.

936. — German, 1797.

Versuch | einer | mineralogischen Beschreibung | von Landeck. | [map] | Von | Leopold von Buch | [tapered rule] | Breslau, Hirschberg und Lissa, in Südpreussen. 1797. | bei Johann Friedrich Korn, dem Altern. | Der Buchladen in Breslau ist auf dem grossen Ringe neben dem königl. Ober-Zoll- und Aceis-Arnt [last words of title difficult to read on copy examined].

8°: [4], [1]-52 p.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Preface.; [1], Sectional title page.; [2], Blank.; [3]-38, Text.; [39], "Anmerkungen."; [40], Blank.; [41]-51, Text of Anmerkungen.; [52], "Anhang."

RARE. Also contained in Buch's *Gesammelte Schriften* (2 vols., Berlin, 1867, 1, 38-72 & map 1).

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 349. • Hoover Collection: no. 189. • LKG: XIV 308. • Roller & Goodman, *Catalogue*, 1976: 1, 179.

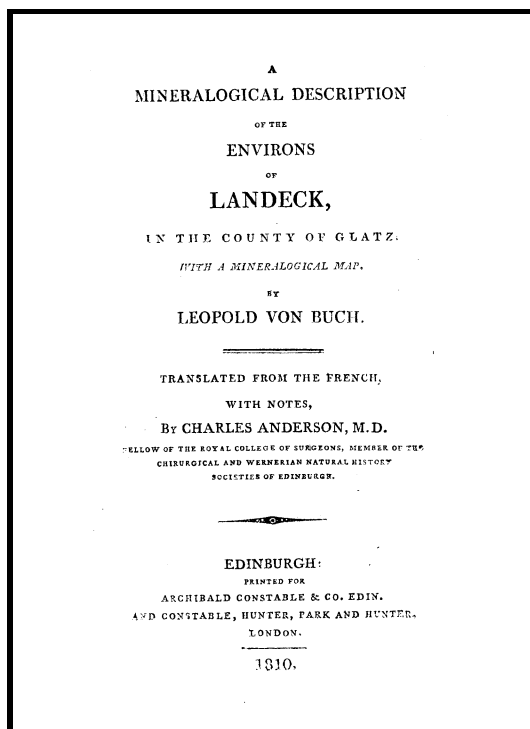
937. English transl., 1810: A | Mineralogical Description | Of The | Environs | Of | Landeck, | In The County Of Glatz. | With A Mineralogical Map. | By | Leopold Von Buch. | [double rule] | Translated From The French, | With Notes, | By Charles Anderson, M.D. | [...3 lines of titles and memberships...] | [tapered rule] | Edinburgh: | Printed For | Archibald Constable & Co. Edin. | And Constable, Hunter, Park And Hunter, | London. | [rule] | 1810.

8°: π^7 A-H⁸ I⁶; 77ℓ.; [iii]-xvi, [i]-v, [1], [7]-140 p., one folding colored map, "Mineralogical | Map | Of the County of | Glatz", engraved by Wm. Davison.

CONTENTS: [iii-iv], Title page, verso "Printed by Ad. Neill & Co. | ..."; [v], Dedication to Robert Jameson, dated 1 February 1810.; [vi], Blank.; [vii]-viii, "Contents."; ix-xvi, "Translator's Preface."; [i]-v, "Advertisement | Prefixed to the | French Translation."; [1 pg], Blank.; [7]-12, "The | Author's Preface."; [13], Blank.; [14]-136, Text.; 137-140, "Works Published By | Archibald Constable & Co., Edinburgh, | ..."

VERY SCARCE. Translation by Charles Anderson from *Versuch einer mineralogischen Beschreibung von Landeck* (Breslau, 1797), with additional notes added by the translator who was a staunch supporter of Werner.

Charles Anderson. (BORN: ; DIED:) *Scottish geologist & physician.* Anderson was a Fellow of the Royal College of Surgeons and a member of the Wernerian Society of Edinburgh.



MINERALOGICAL DESCRIPTION, 1810

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 179. (Anderson)

938. French transl., 18—: FRENCH TRANSLATION OF Versuch einer mineralogischen Beschreibung von Landeck 8°: ?? RARE.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 179.

939. — German, 1802-9.

Geognostische Beobachtungen | auf | Reisen | durch | Deutschland und Italien | angestellt | von | Leopold von Buch | [...2 lines of titles and memberships...] | [rule] | Erster Band | [rule] | Mit Kupfer und Charter. | [tapered rule] | Berlin | bei Haude und Spener | 1802.

2 vols. [VOL 1: 1802] 8°: [i]-xxii, [2], [1]-320 p., one folded handcoloured mineralogical map of Schlesien and 2 plates. [VOL 2: 1809] 8°: [2], [1]-318 p., frontispiece, 5 plates. In some copies of the second volume there is an added title page, "Mit einem Anhang von mineralogischen Briefen aus Auvergne an den geh. oberberggrath Karsten von demselben Verfasser."

CONTENTS: [Vol 1] [Frontispiece: folding map of Schlesien]; [i-ii], Title page, verso blank.; [iii], Dedication to Abraham Gottlob Werner.; [iv], Blank.; v-vi, Text of dedication.; [vii]-xvii, "Inhalt."; [2 pgs], "Druckfehler."; [1]-320, Text.; [At end], 2 charts.

[Vol 2] [Frontispiece: scenic geological view]; [2 pgs], Title page, verso blank.; [1], "Inhalt."; [2], Blank.; [3]-311, Text.; [312]-318, "Höhenmessungen."; [1 pg], "Druckfehler."; [1 pg], Blank.; [At end], 5 plates showing cross-sections and maps.

BUCH

RARE. Work of this eminent German geologist including the first geological map of Schlesien from the year 1797 with 10 different colours depicting the "Riesen-Gebirge" near Breslau now in Poland, but also dealing with the mineralogy and geology of the "Salzkammergut" near Berchtesgaden and Salzburger Land. The second volume begins as a mineralogical letter from Leopold von Buch to K.G.L. Karsten, and it deals with the Monte Albano and Puy de Dôme. The illustrations and maps of the Puy de Dôme near Clermont-Ferrand are especially of interest.

REFERENCES: LKG: XIV 519. • Roller & Goodman, *Catalogue*, 1976: 1, 179.

940. — German, 1810.

Reise durch Norwegen | und | Lappland. | [tapered rule] | von | Leopold von Buch | [...2 lines of titles and memberships...] | [rectangular map] | Erster Theil | [tapered rule] | Berlin | bei G.C. Nauck. | 1810.

2 vols. [VOL 1] 8°: [i]-x, [1]-486 p., engraved title page. [VOL 2] 8°: [i]-vi, [1]-406, [2] p., engraved title page, 3 folding maps.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-vi, "Vorrede."; [vii]-x, Contents.; [1], Sectional title page, "Reise | nach dem hohen Norden."; [2], Blank.; [3]-486, Text.; [At end], One folding map.

[Vol 2] [i-ii], Title page, verso blank.; [iii]-vi, "Zweyter Theil | Inhalt."; [1], Sectional title page, "Reise | nach dem hohen Norden."; [2], Blank.; [3]-400, Text.; 401-406, "Anhang."; [2 pgs], Errata.; [At end], 2 maps (one folding).

VERY SCARCE. Von Buch traveled for two years 1806-1808, in Scandinavia and Lapland. This publish account of the travels added considerable information about these regions, especially in the areas of climatology, mineralogy and geology.

REFERENCES: Adams, *Birth and Development*, 1938: 234-35. • Geikie, *Founders of Geology*, 1905: p. 250-51. • LKG: XIV 715. • Roller & Goodman, *Catalogue*, 1976: 1, 179. • Woodward, *History of Geology*, 1911: 60. • Zittel, *History of Geology*, 1901: p. 62.

941. English transl., 1813: Travels | Through | Norway And Lapland, | During The Years 1806, 1807, And 1808, | By | Leopold Von Buch, | Member Of The Royal Academy Of Sciences At Berlin. | Translated From The Original German | By | John Black. | With Notes And Illustrations, Chiefly Mineralogical, | And Some Account Of The Author, | By | Robert Jameson, F.R.S.E.; F.L.S. &c. | Professor Of Natural History In The University Of Edinburgh. | [double rule] | Illustrated with Maps and Physical Sections. | [double rule] | London: | Printed For Henry Colburn, | British And Foreign Public Library, Conduit-Street, Hanover-Square; | And Sold By George Goldie, Edinburgh; And | Jomn Cumming, Dublin. | [rule] | 1813.

4°: [i]-xviii, [1]-460 (i.e., 440), [6] p., frontispiece (geological cross section), one folding map (p. 311). Irregular pagination: last page labeled 460 but is 440 by count.

CONTENTS: [Frontispiece]; [i-ii], Title page, verso blank.; [iii]-xi, "Translator's Preface."; [xii], Blank.; [xiii]-xiv, "Author's Preface."; [xv]-xviii, "Contents."; [1]-460 (i.e., 440), Text.; [6 pgs], "Appendix."

VERY SCARCE. Translation by John Black of *Reise durch Norwegen und Lappland* (Berlin, 1810). To this is added additional information by ROBERT JAMESON on the mineralogical descriptions and biographical details of von Buch.

John Black. (BORN: ; DIED:) English translator.

BIOGRAPHY NEEDED

REFERENCES: NUC: [NB ?????????]. • Roller & Goodman, *Catalogue*, 1976: 1, 179. (Black)

942. Italian transl., 1817: Viaggio in Norvegia, ed in Lapponia fatto negli anni 1806, 1807, e 1808. Preceduto da un'introduzione del sig. A. di Humboldt. Tradotto e corredato di note dal Conte Cav. Luigi Bossi. Con tavole in rame colorate. Milano, dalla Tipografia Sonzogno e Comp., 1817.

4 vols. [VOL 1] 16°: xxxvi, 219, [1] p. [VOL 2] 16°: 287 p. [VOL 3] 16°: 257, [1] p. [VOL 4] 16°: 255, [1] p. PAGE SIZE: 182 x 112 mm.

RARE. Brossura editoriale rosa pallido con titolo e piccolo mappamondo inciso entro bordure ornate alle brossure anteriori e, a quelle posteriori, xilografie con figure di velieri, sempre entro bordure ornate. Complessive 18 tavole incise su rame f.t. dal Dall'Acqua, molte delle quali in bella coloritura acquerellata coeva del Lazaretti, raffiguranti vedute, profili orografici, animali e costumi della Scandinavia. In barbe, in ottimo stato conservativo, con solo qualche rara fioritura. Tomi XXXV-XXXVIII della "Raccolta di viaggi dopo quelli di Cook eseguiti tanto per mare quanto per terra, e non pubblicati fin ora in lingua italiana", comprendenti la prima traduzione italiana, dovuta a Luigi Bossi e da lui stesso annotata, di questa significativa relazione di viaggio in Scandinavia del geologo tedesco Christian Leopold Von Buch, *Reise durch Norwegen und Lappland* (Berlin, bey G. C. Nauck, 1810). Il Buch (Stolpe, Pomerania, 1774-Berlino, 1853), stimato geologo tedesco, dopo aver visitato la Boemia, la Turingia, la Slesia, l'Italia e la Francia, nel biennio 1806-1808 condusse esplorazioni geologiche in Lapponia e in Scandinavia, traendone per il materiale per il presente volume.

Brunet, II, 1367. Poggendorff, I, 325. Engelmann, 709. Bruun, III 843. Henze, I 384. Norman Library, 364. Schiötz, 158. Chavanne, 3147. Griep/Luber, I, 190. Dinse, 376. Dictionary of Scientific Biography, II, 555. Roller/Goodman, I, 179. Sul Buch, *Allgemeine Deutsche Biographie*, III 468.

REFERENCES: Brunet: 2, 1367. • Ward & Carozzi, *Geology Emerging*, 1984: p. 363.

943. — German, 1867-85 [Collected works].

Leopold von Buch's | Gesammelte Schriften | [rule] | Herausgegeben | von | J. Ewald, J. Roth und H. Eck. | Erster Band. | Mit Dreizehn Tafeln. | [ornate rule] | Berlin, | Druck Und Verlag Von Georg Reimer. | 1867.

4 vols. [VOL 1: 1867] 8°: [i]-lii, [1]-739, [1] p., 13 plates. [VOL 2: 1870] 8°: [i]-vii, [1], [1]-783 p., 8 plates. [VOL 3: 1877] 8°: [i]-vii, [1], [1]-714 p., 25 plates. [VOL 4, part 1: 1885] 8°: [i]-xii, [1]-512 p., plates I-XXIX. [VOL 4, part 2: 1885] 8°: [4], [513]-1058 p., plates XXX-LXVI.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-iv, "Vorrede."; [v]-xlviii, "Leopold von Buch's Leben und Wirken | bis zum Jahre 1806."; [xlix]-lii, "Inhaltsverzeichniss."; [1], Sectional title page, "L. von Buch's | gesammelte Schriften."; [2], Blank.; [3]-739, Text.; [1 pg], "Verbesserungen."

[Vol 2] [i-ii], Title page, verso blank.; [iii]-iv, "Vorrede."; [v]-vii, "Inhaltsverzeichniss."; [1 pg], "Verbesserungen."; [1], Sectional title page, "L. von Buch's | gesammelte Schriften | Zweiter Band."; [2], Blank.; [3]-783, Text.

[Vol 3] [i-ii], Title page, verso blank.; [iii]-

iv, "Vorrede."; [v]-vii, "Inhaltsverzeichnis."; [1 pg], "Verbesserungen."; [1], Sectional title page, "L. von Buch's | gesammelte Schriften | Dritter Band."; [2], Blank.; [3]-714, Text.

[Vol 4, part 1] [i-ii], Title page contained in ruled box, verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "Vorrede."; [vii]-xii, "Inhaltsverzeichnis."; [1], Sectional title page, "L. von Buch's | gesammelte Schriften | Vierter Band."; [2], Blank.; [3]-512, Text.

[Vol 4, part 2] [2 pgs], Series title page, verso blank.; [2 pgs], Title page, verso blank.; [513]-1058, Text.

RARE. The collected writings of von Buch published over the course of 17 years and after his death.

REFERENCES: NUC: [NB ????????]. • Roller & Goodman, *Catalogue*, 1976: 1, 179.

BUCHNER, Christian Ludwig Otto. (BORN: Darmstadt, Germany, 22 May 1828; DIED: Giessen, Germany, 5 February 1897) *German physicist & naturalist.*

Buchner was an instructor of natural history at the Realschule in Giessen. Besides meteors, he authored works on mineral oils, birds, and other natural subjects.

REFERENCES: DBA: I 156, 359; II 192, 338-352. • *Hessische Biographien*. • Poggendorf: 3, 210 & 4, 200. • WBI.

944. — German, 1859 [First edition].

Die | Feuermeteore, | insbesondere | die Meteoriten | historisch und naturwissenschaftlich betrachtet | von | Dr. Otto Buchner. | [ornate rule] | Gießen, 1859. | J. Ricker'sche Buchhandlung.

4°: iv, 192 p. RARE.

REFERENCES: BL. • Brown, *Bibliography of Meteorites*, 1953: no. ?? . • NUC.

945. — German, 1863 [First edition].

Die | Meteoriten | In Sammlungen, | Ihre Geschichte, Mineralogische Und | Chemische Beschaffenheit. | Von | Dr. Otto Buchner. | [ornate rule] | Leipzig, | Verlag Von Wilhelm Engelmann. | 1863.

8°: xxvi, 202 p.

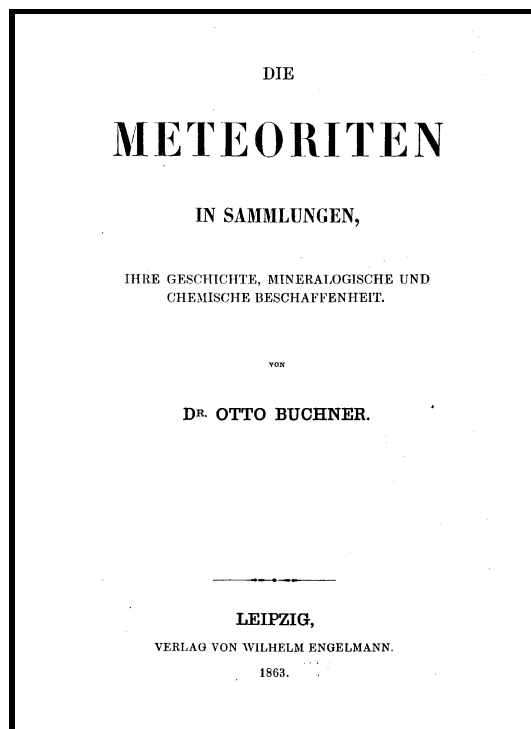
RARE. A remarkable work giving a comprehensive look at the known meteorite falls, their mineralogy, the chemical composition of specimens, the major meteorite collections with a listing of the falls represented, and methods used in cataloging the collections. To help determine a falls monetary worth, Buchner listed not only the meteorites localities held in various public and private collections, but also the weight of each of the 263 falls represented.

REFERENCES: BL. • Brown, *Bibliography of Meteorites*, 1953: no. ?? . • Burke, *Cosmic Debris*, 1986: p. 210. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 180.

BUCHWALD, Eberhard.

946. — German, 1912 [First edition].

Sammlung Göschen | [rule] | Einführung | in die | Kristalloptik | Von | Dr. Eberhard Buchwald | Assistant am physikalischen Institut der Universität Breslau | Mit 124 Abbildungen |



DIE METEORITEN, 1863

[ornament] | Berlin und Leipzig | G.J. Göschen'sche Verlagshandlung G.m.b.H. | 1912.

8°: [1]-124, 1-[32] p., 124 illus. PAGE SIZE: 154 x 100 mm.

CONTENTS: [1-2], Title page, verso "Spamersche Buchdruckerei in Leipzig."; [3], "Inhalt."; [4], "Literatur."; [5]-122, Text.; [123]-124, "Register."; 1-[32], Publisher's list.

SCARCE. Buchwald in his *Introduction to Crystal Optics* describes crystals with one and two axes that do not polarize light, crystals with polarization on all axes, light absorption inside the crystal, influence of temperature on optical transmission, etc.

Contents: Einleitung (pp. 5-15). I Teil. Einachsige Kristalle ohne Drehvermögen (pp. 16-69). II Teil. Zweiachsige Kristalle ohne Drehvermögen (pp. 70-101). III Teil. Kristalle mit Drehvermögen (pp. 102-113). IV Teil. Absorption, Einfluß von Temperatur usw. (pp. 114-122). Register (pp. 123-124).

REFERENCES: NUC.

BUCKLAND, William, Reverend. (BORN: Axminster, England, 1784; DIED: Oxford, England, 14 August 1856) *English geologist, mineralogist & clergyman.*

He was dean of Westminster from 1845. First to note in England the action of glacial ice on rocks, he did much to bring physical and natural science into high repute and was responsible for giving Oxford (where he was a student and later a fellow) an international name in science. He wrote *Reliquiae Diluvianae* (1823) and *Geology and Mineralogy Considered with Reference to Natural Theology* (1836). Francis T. Buckland, English surgeon and naturalist, was his son.

William Buckland may not be a household name, but to dinosaur lovers the world over, he should be. Professor of

BUCKLAND



BUCKLAND

Geology at Oxford, Buckland is responsible for the world's first description of a recognized dinosaur fossil, although the term "dinosaur" didn't exist at the time. In 1824, Buckland published *Notice on the Megalosaurus or Great Fossil Lizard of Stonesfield*.

In the same science meeting where he described *Megalosaurus* Buckland also announced – reassured by Cuvier that it was correct – the first fossil mammal from the Age of Reptiles. In its own way, this tiny mammal fossil was as surprising as the giant reptile he had just named. Conventional wisdom of the time said mammals came only after the great reptiles. Years later, Buckland tried to resolve the controversy he had raised by suggesting that the mammal was an "inferior" marsupial.

Buckland's discoveries in paleontology were as varied as they were distinguished. In 1822, in *An Assemblage of Fossil Teeth and Bones*, he described a feeding frenzy of ancient hyenas based on fossil remains. That same year he discovered an ancient human skeleton. He initially and correctly identified it as male, but later reversed the decision and proclaimed the skeleton not only female but also (perhaps in jest) a witch! After calling it the Red Witch, he finally gave the skeleton the more palatable name of the Red Lady of Paviland.

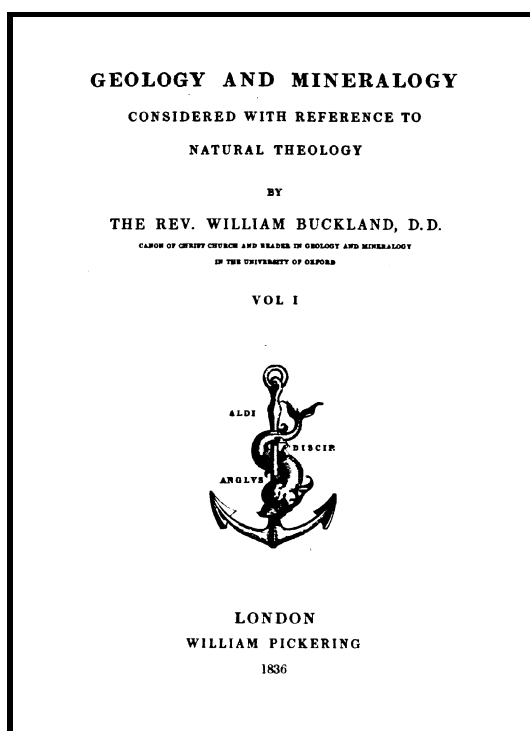
Unlike the scriptural geologists of his day, Buckland did not hold to a literal interpretation of Genesis, especially in terms of geologic time. Nevertheless, he was a deeply religious man who devoted much of his life to supporting scripture with geology, attracting criticism from theologians and scientists alike. Buckland had an open mind; persuaded by Louis Agassiz and his own observations, he eventually traded his belief in the diluvial theory for support of the Ice Age theory. And Buckland was a fantastic popularizer of science who had the grace not to take himself too seriously. One of his students recounted how Buckland once

... rushed, skull in hand, at the first undergraduate on the front bench – and shouted, "What rules the world?" The youth, terrified, threw himself against the next back seat, and answered not a word. He rushed then on me, pointing the hyena full in my face – "What rules the world?" "Haven't an idea," I answered. "The stomach, sir," he cried. In another lecture, Buckland happily strutted about the room imitating the gait of giant birds he believed left their footprints in ancient deposits. (The "birds" could well have been bipedal dinosaurs.) Afterwards, one of Buckland's high-minded colleagues scoffed, "the grossness of the Buffoonery acted on me like an emetic."

For more information: *The Great Devonian Controversy* by Martin J.S. Rudwick *The Dragon Seekers*

by Christopher McGowan *The Meaning of Fossil* by Martin J.S. Rudwick "The Awful, Terrible Dinosaurian Irony" by Stephen Jay Gould in *Natural History Magazine*, February, 1998 issue *Hunting Dinosaurs* by Louie Psihoyos *The Reign of the Dinosaurs* by Jean-Guy Michard *Scenes from Deep Time* by Martin J.S. Rudwick *The Ice Finders* by Edmund Blair Bolles *Evolution* by Linda Gamlin

REFERENCES: *Annual Register*. • Barr, *Index to Biographical Fragments*, 1973: 38. • BBA: I 165, 359-376; II 1350, 399. • *Catalogue of Portraits of Naturalists*: 235 [2 portraits listed]. • Cleevely, *World Palaeontological Collections*, 1983: 71. • DNB. • DSB: 2, 566-72 [by W.F. Cannon]. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 1, 203. • Lambrecht & Quenstedt, *Catalogus*, 1938: 66. • Poggendorff: 1, cols. 331-2. • Sarjeant, *Geologists*, 1980: 2, 649-52, Suppl. 1 (1986), 1, 319 & Suppl. 2 (1995), 1, 474-5. • WBI. • *World Who's Who in Science*: 266.



GEOLOGY AND MINERALOGY, 1836

947. — English, 1836 [First edition].

Geology And Mineralogy | Considered With Reference To | Natural Theology | By | The Rev. William Buckland, D.D. | Canon Of Christ Church And Reader In Geology And Mineralogy | In The University Of Oxford | Vol I [-II] | [ornament] | London | William Pickering | 1836.

2 vols. [VOL 1] 8°: π^6 b⁶ B-2P⁸ 2Q⁴; 312 ℓ .; [1]-8, [i]-xvi, [1]-599, [1] p.; [VOL 2] 8°: π^5 b² B-I⁸; 69 ℓ .; [6], [i]-vi, [2], [1]-128 p., 87 plates (numbered 1-69, 15', 25', 26', 26'', 26a-b, 27a-f, 44', 44'', 46', 46''), and 56a). PAGE SIZE: 224 x 140 mm. uncut.

CONTENTS: [Vol 1] [1]-8, "Works Published By William Pickery."; [i-ii], Series title page, "The Bridgewater

Treatises | On The Power Wisdom And Goodness Of God | As Manifested In The Creation | [rule] | Treatise VI | Geology And Mineralogy Considered With Reference | To Natural Theology | By The Rev. William Buckland, D.D. | In Two Volumes | Vol I | Thou Lord In The Beginning Hast Laid The Foundation Of The Earth. | Psalm CII. 25.,” verso 2 long quotations.; [iii-iv], Title page, verso “[rule] | C. Whittingham, Took Court, Chancery Lane | [rule].”; [v]-vi, Dedication to Davies Gilbert, signed William Buckland, 30 May 1836.; [vii]-viii, “Preface.”; [ix], “The Scientific Reader ...”; [x]-xii, “Notice.”; [xiii]-xvi, “Contents | Of The First Volume.”; [1]-596, Text.; [597]-599, “Supplementary Notes.”; [1 pg], “Errata.”

[Vol 2] [4 pgs], Advertisements.; [2 pgs], Blanks.; [i-ii], Series title page, “The Bridgewater Treatises | On The Power Wisdom And Goodness Of God | As Manifested In The Creation | [rule] | Treatise VI | Geology And Mineralogy Considered With Reference | To Natural Theology | By The Rev. William Buckland, D.D. | In Two Volumes | Vol II | Thou Lord In The Beginning Hast Laid The Foundation Of The Earth. | Psalm CII. 25.,” verso 2 long quotations.; [iii-iv], Title page, verso “[rule] | C. Whittingham, Took Court, Chancery Lane | [rule].”; [v]-vii, “List Of Engravings.”; [1 pg], Blank.; [1]-110, “Explanation Of The Plates.”; [Plates 1-69, part folding, geological & palaeontological subjects.]; [111]-128, “Index.”

SCARCE. In this work, Buckland helped redefine the role of science and theology. Geologists of the day wanted to produce a detailed explanation that would constitute a geological history, period by period, of the events of a given locality ... Buckland was perhaps the best able of the British geologists and probably the most acute to build a careful local stratigraphy and local dynamic explanations collaborated with the addition of fossil evidence.

REFERENCES: BMC: 1, 276. • Roller & Goodman, *Catalogue*, 1976: 1, 180. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 896.

948. 2nd edition, 1837: Geology And Mineralogy | Considered With Reference To | Natural Theology | By | The Rev. William Buckland, D.D. | [...2 lines of titles and memberships...] | Vol I | [ornament] | London | William Pickering | 1837.

2 vols. [VOL 1] 8°: [1]-8, [i]-xvi, [1]-619, [1] p. [VOL 2] 8°: [i]-vi, [2], [1]-129, 110a (dated 4 April 1837) p., 87 plates on 91 leaves (some folded; numbered 1-69, 2', 15', 25', 26', 26", 26"', 26a-b, 27a-f, 44', 44", 46', 46", and 56a). Some plates have multiple parts and some are double. COLOPHON: C. Whittingham, Took Court, Chancery Lane. Publisher's device on title page (printer's mark of the Aldine Press).

SCARCE. Published as part of the series: *The Bridgewater treatises on the power, wisdom and goodness of God, as manifested in the creation. Treatise VI.* This edition uses the same sheets as the first edition but with the additional pages 597-619, “Supplementary Notes” found in volume one, and the additional plate 2'. According to Stafleu and Cowan, This edition was issued in octavo and quarto volumes, and the supplementary material was also issued separately.

REFERENCES: BMC: 1, 276. • Roller & Goodman, *Catalogue*, 1976: 1, 181. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 896.

949. 1st American issue, 1837: Geology And Mineralogy | Considered | With Reference To Natural Theology | By The Rev. William Buckland, D.D. | [...2 lines of titles and memberships...] | In Two Volumes. | Vol. I. | Philadelphia, | Carey, Lea And Blanchard, | [short rule] | 1837.

2 vols. [VOL 1] 12° (in 6s): [i]-xv, [13]-443 p. [VOL

2] 12° (in 6s): [i]-vii, [1]-131 p., 87 plates as in the first London edition of 1836 (one colored, 6 folding, 3 double page).

SCARCE. Series: The Bridgewater treatises on the power, wisdom, and goodness of God, as manifested in the creation ; Treatise VI.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 181. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 896.

950. 2nd American issue, 1841: Geology And Mineralogy | Considered | With Reference To Natural Theology. | By The | Rev. William Buckland, D.D. | Caanon Of Christ Church And Reader In Geology And Mineralogy In The | University Of Oxford. | A New Edition. | With Supplementary Notes. | [rule] | In Two Volumes. | Vol. I. [-II.] | [rule] | Philadelphia: | Lea & Blanchard. | | 1841.

2 vols. [VOL 1] 12° (in 6s): [i]-xv, [13]-468 p. [VOL 2] 12° (in 6s): [i]-vii, [1]-131 p., 87 plates as in the first London edition of 1836 (one colored, 6 folding, 3 double page). VERY SCARCE.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 181.

951. 3rd edition, 1858: Geology and mineralogy considered with reference to natural theology by the late Very Rev. William Buckland ... A new ed., with additions, by Professor Phillips ... Mr. Robert Brown...and memoir of the author. Edited by Francis T. Buckland ... London; New York, G. Routledge, 1858.

2 vols. [VOL 1] 8°: [4], [i]-lxxxiii, [1]-552 p., frontispiece (portrait of William Buckland). [VOL 2] 8°: [4], [1]-143, [1] p., plates 2-90.

VERY SCARCE. A posthumous edition with a memoir on the life of Buckland, a bibliography and portrait edited by Francis Trevelyan Buckland [1826-1880], with his collaborators Robert Brown [1842-1895], Richard Owen [1804-1892], and John Phillips [1800-1874].

REFERENCES: BMC: 1, 276. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 896.

952. 4th edition, 1869-70: Geology And Mineralogy | As Exhibiting The | Power, Wisdom, And Goodness Of God | By The | Very Rev. Wm. Buckland, D.D., F.R.S., | [...one line of titles...] | With Additions | By | Professor Owen, F.R.S., Professor Phillips, M.A., L.L.E., And Robert Brown, F.R.S. | Fourth Edition, Edited | By | Francis T. Buckland, M.A., | [...one line of titles...] | Vol. I. [-II.] | London, Bell And Daldy, York Street, Covent Garden. | 1869 [-1870].

2 vols. [VOL 1: 1869] 8°: [4], [i]-lxxxiii, [1]-552 p., frontispiece (portrait of William Buckland). [VOL 2: 1870] 8°: [4], [1]-143, [1] p., plates 2-90.

VERY SCARCE. Reissue of the third edition(?).

REFERENCES: NUC.

953. French transl., 1838: La | Géologie Et La Minéralogie | Dans Leurs Rapports | Avec La Théologie Naturelle, | Par | Le Révérend Docteur William Buckland, | [...2 lines of titles and memberships...] | traduit de l'anglais, | Par M.L. Doyere, | [...2 lines of titles and memberships...] | Initio tu, Domine, terram fundasti. | Ps. Cip. 26. | Tome Premier. [-Seconde.] | Paris, | Crochard Et C^{ie}, Libraires, | Place De L'École-De-Médecine, 13. | [short rule] | 1838.

2 vols. [VOL 1] 8°: [i]-xvi, [1]-545, [3] p. [VOL 2] 8°: [i]-vii, [1], [1]-149, [3] p., 69 plates.

CONTENTS: [Vol 1] [i-ii], Half title page, “La Géologie Et La Minéralogie | Dans Leurs Rapports Avec La Théologie Naturelle,” verso “Imperie et Fonderie De Felix Locquin et Compagnie.”; [iii-iv], Title page, verso blank.; [v]-viii, “Note Du Traducteur.”; [ix]-xi, “Préface De L'Auteur.”; [xii], Blank.; [xiii]-xvi, Contents.; [1]-525, Text.; 526-545, “Notes Supplémentaires.”; [1 pg], Blank.; [1 pg], “Errata.”; [1 pg], Blank.

[Vol 2] [i-ii], Half title page, “La Géologie Et La Minéralogie,” verso “Imperie et Fonderie De Felix Locquin

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et Compagnie.”; [iii-iv], Title page, verso blank.; [v]-vii, “Liste Des Planches.”; [1 pg], Blank.; [1]-128, “Explication Des Planches.”; [129]-149, “Table” (=index).; [1 pg], Blank.; [1 pg], “Errata.”; [1 pg], Blank.; [At end], 69 plates.

VERY SCARCE. Translated by M.L. Doyere from *Geology and Mineralogy considered with Reference to Natural Theology* (1st ed., London, 1836).

M.L. Doyere. (BORN: ; DIED:) *French translator.* Doyere was the adjunct professor of natural history at the Collège Royal de Henri-Quatre.

REFERENCES: BMC: 1, 276. • Roller & Goodman, *Catalogue*, 1976: 1, 180. (Doyere)

954. Abridged French transl., 1838: La géologie et la minéralogie considérées dans leurs rapports avec la théologie naturelle; par le Rév. William Buckland ... abrégé et trduit de l'Anglais par N. Joly ... 2. ed., rev. and enl. Paris, Germer-Baillière, 1838.

12°: iv, 88 p.

RARE. Translation by Nicolas Joly [1812-1885].

REFERENCES: NUC.

955. German transl., 1837: Die Urwelt und ihre Wunder. Stuttgart, Die Natur, ihre Wunder und Geheimnisse by H. Hauff, aus dem Englischen des W. Buckland, von Friedrich Werner und herausgegeben von P. Neff, 1837.

8°: 406 p., 40 lithographs, 1 handcoloured engraved geological profile with 15 different colours.

VERY SCARCE. Translated by Friedrich Werner this is the first German edition of the famous textbook of William Buckland being on *Geology and Mineralogy with reference to Natural Theology*.

REFERENCES: NUC.

956. — German, 1838 [German transl., 2nd edition].

Die Urwelt und ihre Wunder, oder, allgemeine Dartstellung der Geschichte des Erdkörpers von W.P. Schimper. 2. Aufl. des englischen Originals und mit einem Anhang. Stuttgart, P. Neff, 1838.

8°: 406 p., 40 lithographs, one handcoloured engraved geological profile with 15 different colours.

VERY SCARCE. Series: Die Natur ihre Wunder und Geheimnisse, oder, die Bridgewater-Bücher; 5 Bd.

957. German transl., 1838-9: Geologie und Mineralogie in Beziehung zur natürlichen Theologie. Aus dem Englischen, nach der zweiten Ausgabe des Originals, übersetzt und mit Anmerkungen und Zusätzen versehen, von L. Agassiz. Neufchatel. E. Leibrock, Buchhändler in Braunschweig, 1838-39.

2 vols. [VOL 1] 8°: [VOL 2] 8°: 69 (i.e. 88) plates (part fold., part col.)

VERY SCARCE. Agassiz, Louis, 1807-1873. translator.

REFERENCES: BMC: 1, 276.

958. — Swedish, 1845 [Swedish transl.].

Geologi och mineralogi, betraktade med hänseende till den naturliga theologien. 1-2. Öfversättning från andra engelska original-upplagan af Gustaf Thomée ... Stockholm, Zacharias Hæggström, 1845.

2 vols. [VOL 1] 8°: xii, 340 p. [VOL 2] 8°: [4], 410, [2] p., 31 plates.

VERY SCARCE. Samtida marmorerade halvfranska band. Ryggarna något nötta. Samtliga för- och eftersättsblad samt de närmast intill liggande bladen med genomgående fläckar i hörnen. Inlagorna i övrigt rena, men något ojämma p.g.a. fukt. Planscherna delvis lätt åldersfläckade. (Bibliothek i populär naturkunnighet. VI: I-II)

REFERENCES: BL.

959. — English, 1894 [Biography].

The | Life And Correspondence | Of | William Buckland, D.D., F.R.S., | Sometime Dean Of Westminster, Twice President Of | The Geological Society, And First President | Of The British Association. | By His Daughter, | Mrs. Gordon. | [...4 lines of quotation, signed Chaucer...] | With Portraits And Illustrations. | London: | John Murray, Albemarle Street. | 1894.

8°: [iii]-xvi, [1]-288, 1-30 p. A biography of William Buckland written by a relative and incorporating quotes from his correspondence. VERY SCARCE.

CONTENTS: [iii-iv], Title page, verso “Printed by Hazell, Watson, & Viney, Ltd. ...”; [v]-xii, “Preface.”—signed W. Boyd Dawkins, 22 September 1894.; [xiii]-xvi, “Table Of Contents.”; [1]-274, Text.; [275]-277, “Appendix. | A List Of Dr. Buckland’s Appointments | And Literary Titles.”; 278-284, “Published Writings Of Professor William | Buckland.”; 285-288, “Index.”; 1-30, Advertisements.

REFERENCES: BL. • NUC.

BUCQUET, Jean Baptiste Marie. (BORN: Paris, France, 18 February 1746; DIED: Paris, France, 24 January 1780) *French physician & chemist.*

Bucquet first studied law, but turned to medicine and chemistry, and began giving private chemical lessons around 1769. In 1776, he was appointed professor of chemistry and natural history at the École de Médecine. He collaborated with Lavoisier in work on gases and their effects on substances. He was a member of the Paris Académie des Sciences.

REFERENCES: ABF: I 164, 438-443. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 332. • WBI.

960. — French, 1771.

Introduction | a l’Étude | des Corps Naturels, | tirés | du Règne Minéral. | Par M. Bucquet, Docteur-Régent | [...2 lines of titles...] | [double rule] | Tome I. [-II.] | [double rule] | [ornament] | A Paris, rue Saint-Jacques, | Chez Jean-Th. Herissant, Père, Imprimeur | du Cabinet du Roi, Maison & Bâtimens | de Sa Majesté. | [ornate rule] | M. DCC. LXXI. | Avec Approbation & Privilège du Roi.

2 vols. [VOL 1] 12°: a⁸ b⁴ c⁸ A-Pp^{8/4}; 247ℓ.; [i]-xl, [1]-453, [1] p., 2 plates (folding; apparatus & furnace), one folding table (p. 442). [VOL 2] 12°: π² A-li^{8/4} Kk⁸ Ll²; 204ℓ.; [4], [1]-401, [3] p.

CONTENTS: [Vol 1] [i-ii], Half title page, “Introduction | a l’Étude | du Règne Minéral,” verso quotation from Pliny.; [iii-iv], Title page, verso blank; [v]-vi, Dedication.; [vii]-xvi, “Préface.”; [xvii]-xxxvii, “Division des Minéraux.”; xxxviii-xxxviii, “Premier Supplément à la Minéralogie.”; xxxix-xl, “Second Supplément à la Minéralogie.”; [1]-80, “Discours Préliminaire.”; [81]-440, “Introduction a l’Étude des Corps Naturels.”; [441]-444, “Explication des Planches.”; 445-452, “Table des Matières Contenues dans ce Volume.”; 453, Errata.; [1 pg], Blank.

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1]-364, “Introduction

... Des Matières Métalliques.”; 365-369, “Supplément a la Mineralogie.”; 370-391, “Des Eaux Minérales.”; 392, Errata.; 393-401, “Table des Matières Contenues dans ce Volume.”; [3 pgs], “Approbation” and “Privilege du Roi.”

RARE. These lectures by Bucquet were among the first published to combine chemistry and mineralogy, the two subjects having usually been treated separately by earlier writers. A companion work, *Introduction a l'Étude des Corps Naturels tirés du Règne Végétal* (2 vols., Paris, 1773), treated vegetable substances. A third work on animal substances was planned but not executed.

REFERENCES: *Berlinische Sammlungen*: 9, p. 326 [review]. • BL: [990.b.19.20.]. • Cole, *Chemical Literature*, 1988: no. 220. • *Commentarii Lipsiae*: 20, p. 329 [review]. • Edelstein, *Catalog of the History of Chemistry*, 1981: no. 437. • *Göttingische gelehrte Anzeigen*: pp. 510 October I, pp. 119-36 [review]. • *Journal encyclopédique*: 2, p. 302 [review]. • LKG: XII 68. • *Nouv. litt. de Berlin*: p. 399 [review]. • NUC: [NB 0920601]. • Partington, *History of Chemistry*, 1961-70: 3, 103. • Smeaton, W.A., *Fourcroy Chemist and Revolutionary, 1755-1809*. Cambridge, 1962: 6 & 177. • Wallerius, *Brevis Introductio*, 1779: p. 167.

BUÉE, Adrien-Quentin, Abbé. (BORN: 1748; DIED: 1826) *French theologian & mathematician.*

Buée was a French priest belonging to a large group of émigrés, mainly aristocrats and clergymen who fled from France into England from 1792 onwards as a result of the French Revolution. He established himself in Bath, where he supported himself by publishing leaflets and articles in mathematics and science. By 1821, Buée was again in Paris working on a new edition of *Dictionnaire des termes de la Révolution* he had first published anonymously in 1792 before escaping to England.

REFERENCES: ABF: I 165,172-173. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

961. — English, 1804.

Parallel of Romé de l'Isle's and the Abbé Haüy's theories of crystallography. London, Philosophical Magazine (R. Taylor and Co., printers), 1804.

8°: A⁸ B⁴; 12L.; [1]-23, [1] p. (last page blank).
PAGE SIZE: 230 x 145 mm.

RARE. This is a privately published offprint by Robert Clifford of his translation first published in the *Philosophical Magazine* (nos. 74-75, 1804) under the title “A letter from Abbé Buée to Mr. ****, on Mr. Romé de l'Isle and the Abbé Haüy's theories of crystallography.” Originally written in French, Buée had authored the letter in order to contrast the differences between the crystallographic systems of Romé de l'Isle and Haüy, which at the time were both considered similar in nature. It is an important critique of Romé de l'Isle's system, which Buée characterizes as primarily descriptive, as opposed to Haüy's mathematically based system. Buée shows that Romé's selection of primitive forms was arbitrary, where as Haüy's was based upon direct observations of the crystals. The original article was reprinted in Nicholson's *Journal* (vol. 9, 1804) under the title “Outlines of the Mineralogical Systems of Romé de l'Isle and the Abbé Haüy: with Observations.” There it is introduced by a letter from R. Clifford who translated

it from Buée's original French. At that time Buée was in England having fled Paris and the Reign of Terror.

REFERENCES: BL: [7202.aaa.15.(1.)]. • Burke, *Origins of the Science of Crystals*, 1966: p. 77. • NUC: [no copy listed].



BUFFON

BUFFON, Georges-Louis Leclerc, Comte de. (BORN: Montbard, Côte d'Or, France, 7 September 1707; DIED: Paris, France, 16 April 1788) *French naturalist & biologist.*

Buffon was from 1739 he was keeper of the Jardin du Roi (later the Jardin des Plantes) in Paris and made it a center of research during the Enlightenment. He devoted his life to his monumental *Histoire Naturelle* (44 vol., 1749-1804), a popular and brilliantly written compendium of data on natural history interspersed with Buffon's own speculations and theories. Of this work, the volumes *Histoire Naturelle des Animaux* and *Époques de la Nature* are of special interest. His famous *Discours sur le Style* was delivered (1753) on his reception into the French Academy. He also contributed to the mathematics of probability.

REFERENCES: ABF: I 165, 290-404; II 108, 134-160. • Browne, J., “Georges-Louis Leclerc, Comte de Buffon (1707-88),” *Endeavour*, 12 (1988), 86-90. • *Buffon 88: actes du Colloque international pour le bicentenaire de la mort de Buffon*. (Paris, Montbard, Dijon, 14-22 juin 1988). Réunis par Jean-Claude Beaune ... [et al.]; sous la direction de Jean Gayon; préface d'Ernst Mayr; postface de Georges Canguilhem. Paris, J. Vrin; Lyon, Institut interdisciplinaire d'études épistémologiques, 1992. ix, 771 p., illus. • *Catalogue of Portraits of Naturalists*: 236-9 [92 portraits listed]. • DSB: 2, ?? • Dujarric de la Rivière, R., *Buffon, sa vie, ses oeuvres, pages choisies*. Paris, J. Peyronnet, 1971. 123 p., plates (part colored). • Feller, *Biographie Universelle*, 1851. • Fellows, O.E. and S.F. Miliken, *Buffon*. New York, Twayne Publishers, c1972. 186 p. [Published as: *Twayne's world authors series*, TWAS 243. France]. • Gascar, P., *Buffon*. [Mayenne], Gallimard, 1983. 267 p. [ISBN 2070700070]. • Lacépède, M. le Comte de, *Vie de Buffon*. Amsterdam, Paris, Maradan, 1788. 187 p. • Michaut, N., *Eloge de Buffon par Narcisse Michaut; ouvrage couronné par l'Académie française précédé d'une notice par Émile Gebhart*. Paris, Hachette, 1878. [6], xxxii, 233, [3] p. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 338. • Roger, J., *Buffon: a life in natural history* by Jacques Roger; translated by Sarah Lucille Bonnefoi; edited by L. Pearce Williams. Ithaca, N.Y.; London, Cornell University Press,

1997. xvii, 492 p., illus. [Published as: *Cornell History of Science Series*; ISBN: 0801429188]. • WBI. • *World Who's Who in Science*: 268.

Buffon's *Natural History, General and Particular* for the first time presented a survey of the whole of natural science in a popular form. It is a monumental work, justifiably praised, containing information on almost every topic of 18th century natural history. It is also brilliantly written and through its diversity of topics, originality and richness of thought, it became an authoritative voice until the time of Darwin.

In 1739 Buffon became director of the Jardin du Roi (now Jardin des Plantes). In this position he began a catalog of the collections, but soon developed the project into a complete study of nature that was unlike anything previously known in the literature. It is among the first scientific works to present its ideas in an autonomous way, free from religious influence. As such the idea is developed that the earth and nature have developed over a very long period of geological time, and with in this intellectual framework, botany, paleontology, zoology, geography, mineralogy, etc are described.

Beginning first with the help of his assistant, LOUIS DUBOIS, and later with other collaborators, but always under his careful stewardship and control, this vast publication was advertised in a prospectus circulated in 1749. In it Buffon outlines the scope of the project, the method of preparation, the number of volumes (Buffon envisioned 15 volumes, but the completed work is 44 volumes), the contents of each volume, their illustrations, etc. Even though it was an expensive set to publish, the *Histoire Naturelle* proved to be a financial and popular success that is shown by the frequency with which the work was reissued and translated. However, it is this popularity that makes the bibliography of it various editions, issues, and translations a torrid problem. To the original work were published supplemental volumes that are usually not included in later printings of the text. Also, the individual sections on birds, animals, minerals etc. were often times published as stand alone works for buyers not interested in purchasing the complete and expensive set. This all makes the complete bibliography of Buffon's *Histoire Naturelle* a knot that may never be fully unraveled.

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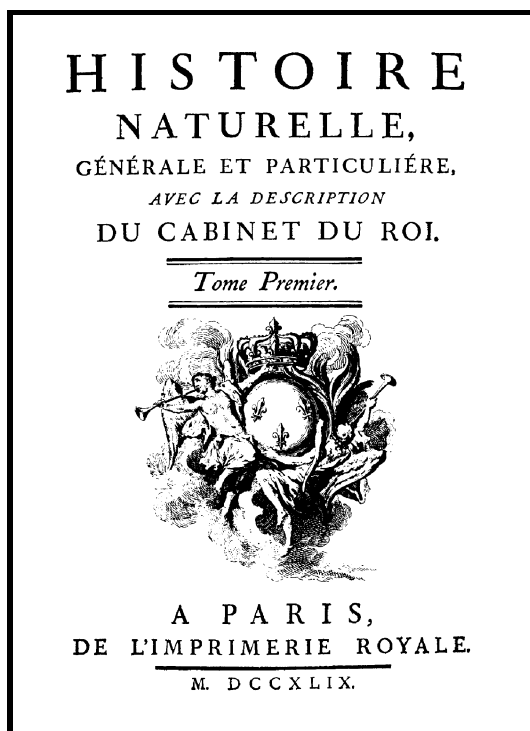
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Xxx xxxxxxx xx xxxxx xx xxxxxxx. Xxx xxxxxxx xx xxxxx xx
xxxxxx. Xxx xxxxxxx xx xxxxx xx xxxxxxx. Listed below are
given details of the various editions known from a variety of
sources to the compiler that contain or are likely to contain
the mineralogical section.

962. Prospectus, 1749: Histoire Naturelle, Générale et Particulière, avec la Description du Cabinet du Roy. Paris, De L'Imprimerie Royale, 1749.

4^o: [2], 8 p., large woodcut vignette on title.

EXTREMELY RARE. The Prospectus for the *Histoire Naturelle*, written by Buffon himself, announcing to the world the publication of his revolutionary natural history work. It was to present “for the first time a complete survey of natural history in a popular form...[Buffon] was the first to present the universe as one complete whole and to find no phenomenon calling for any but a purely scientific explanation.” (Printing and the Mind of Man). Here the project is outlined, with Buffon envisioning 15 volumes to complete the text, the methodology followed, the contents of each volume, types of illustrations, etc. He emphasizes that the appearance of each volume will resemble the prospectus. At the conclusion, are listed the two booksellers – Durand and Pissot – through whom copies of the work could be obtained.

REFERENCES: BL: [?????]. • Jonathan Hill, Bookseller: cat. ?? (2002), no. ?? . • NUC: [no copy listed]. • PPM: *Printing and the Mind of Man*: no. 198.



HISTOIRE NATURELLE, 1749

963. — French, 1749-1804 [First edition].

Histoire	Naturelle,	Générale Et Particuliere.
Avec La Description	Du Cabinet Du Roy.	

[double rule] | Tome Premier. | [double rule] |
[ornament] | A Paris, | De L'Imprimerie Royale |
[rule] | M. DCCXLIX.

44 vols. in 45, 4^o, with engraved vignettes on the titles of the first 15 vols., headpieces, and 1279 engraved plates including engraved portrait frontispiece (in vol. I of Supplément), 12 maps, and 4 folding tables.

VERY SCARCE. **REWORK THIS ENTRY.** Buffon devoted his life to his monumental *Histoire Naturelle*, a popular and brilliantly written compendium of data on natural history interspersed with Buffon's own speculations and theories. Besides the comprehensive coverage of natural history (including mankind) and minerals, the work incorporates Buffon's highly important *Théorie de la Terre*, elaborated in the fifth volume of the *Supplément* under the title *Des Epoques de la Nature*.

"Buffon's work is of exceptional importance because of its diversity, richness, originality, and influence. Buffon was among the first to create an autonomous science, free of any theological influence. He emphasized the importance of natural history and the great length of geological time. He envisioned the nature of science and understood the roles of paleontology, zoological geography, and animal psychology. He realised both the necessity of transformism and its difficulties. Although his cosmogony was inadequate and his theory of animal reproduction was weak, and although he did not understand the problem of classification, he did establish the intellectual framework within which most naturalists up to Darwin worked." (DSB)

Buffon is considered the founder of evolutionary theory. "Georges Buffon set forth his general views on species classification in the first volume of his *Histoire Naturelle*. Buffon objected to the so-called "artificial" classifications of Andrea Cesalpino and Carolus Linnaeus, stating that in nature the chain of life has small gradations from one type to another and that the discontinuous categories are all artificially constructed by mankind. Buffon suggested that all organic species may have descended from a small number of primordial types; this is an evolution predominantly from more perfect to less perfect forms." (Parkinson, *Breakthroughs*)

Like that other great product of the enlightenment, the *Encyclopédie*, the *Histoire Naturelle* was a collaborative enterprise, outliving its instigator and chief author. The two scientists who were foremost among the several contributors were DAUBENTON and Lacepede (first as Comte de, then as Citoyen): they completed the work after Buffon's death in 1788.

Over 1,000 of the plates are the work of Jacques de Seve, pere et fils: a full list of the artists is provided by Nissen. They range in style from exact anatomical drawings (skeletons, dissections, etc.) to settings of animals in their natural habitat. The headpieces are fanciful masterpieces of baroque decoration.

In spite of the costliness of the work, its numerous editions and translations testify to its popularity. Most

sets lack some or all of the Supplement volumes, and/or various plates. For clarity, below is a breakdown of the various sections of the work:

Histoire Naturelle, Generale et Particuliere, avec la Description du Cabinet du Roi, 15 vols., 1749-67. *Histoire Naturelle des Oiseaux*, 9 vols., 1770-83. *Histoire Naturelle des Mineraux*, 6 vols. (the sixth vol. is the maps bound separately), 1783-88. *Supplément a l'Histoire Naturelle*, 7 vols., 1774-89. *Histoire Naturelle des Quadrupedes Ovipares et des Serpens*, 2 vols., 1788-89. *Histoire Naturelle des Poissons*, 5 vols., An VI-XI (1798-1803.) *Histoire Naturelle des Cetaces*, 1 vol., 1804.

The *Histoire Générale* was a widely reprinted and translated work. Sometimes only individual sections were produced, other times the complete work appeared. Listed below are a spattering of these editions and translations known (or thought) to contain the mineralogical section.

REFERENCES: BMC: 1, 281. • Dibner, *Heralds of Science*, 1955: 193. • *Freilich Sale Catalog*: no. 107. • Nissen (ZBI): 672. • Norman Catalog: no. 369. • PPM: *Printing and the Mind of Man*: 198. • Roller & Goodman, *Catalogue*, 1976: 1, 184. • Sparrow, *Milestones of Science*, 1972: p. 23. • Ward & Carozzi, *Geology Emerging*, 1984: no. 383. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 267.

964. Another edition, 1749-67: *Histoire naturelle, générale et particulière, avec la description du Cabinet du Roi*. Paris, de L'imprimerie nationale, 1749 [-1767].

15 vols. 4^o: [6]-612, [4]-603, [4]-530, xvi-544, [4]-311-[1], vi-[2]-344, [4]-378-[1], [6]-402-[1], [6]-375-[1], [8]-368, [4]-450-[1], [6]-xvi-451-[1], [6]-xx-441-[3], [6]-411-[1], [6]-411-[1], [6]-207-cccxxiv pp. et 579 pll. et 1 tableau dépliant (qqs petits trous de vers aux tomes I et X). VERY SCARCE.

965. Another edition, 1766-99: *Histoire Naturelle, Générale et Particulière, avec la Description du Cabinet du Roi ... Nouvelle Édition*. Amsterdam, 1766-99.

38 vols. Various publishers are: Amsterdam, J.H. Schneider, 1766-79 (21 vols.) and Dordrecht, A. Blussé et fils., 1795-99 (17 vols.). 4^o, engraved portrait by J. Houbraken after Drouais, 1137 plates (8 folding) & 12 maps (10 folding), 31 title vignettes and 38 head-pieces, by C.F. Fritsch, B. de Bakker, C. Buys, J. van Schley and others. All finely hand-colored. PAGE SIZE: 298 x 242 mm.

RARE. This item represents a tall set in its rarest and most costly state, with the meticulous hand-coloring adding another dimension to the fine plates. The periodic avis to the subscribers mentions copies on *grand papier*, but there is no mention of hand-coloring. Landwehr, in his notes to the first edition in Dutch, quotes contemporary source that mention four issues: normal paper, large paper, copies with colored plates and (most expensive of all) copies with plates and vignettes hand-colored.

The set was published and bound in five different sections: *Histoire Naturelle* (15 vols.; Schneider, 1766-71), *Supplément* (7 vols.; vols. I-VI, Schneider, 1774-79 & vol. VII, Blussé, 1799), *Oiseaux* (9 vols.; Blussé, 1796-1795-1799), *Mineraux* (5 vols.; Blussé, 1798-9), and *Ovipares et Serpens* (2 vols.; Blussé, 1798-9). The correct number of plates is problematic: Nissen calls for 1130 plates and maps. Other sets have been sold with 1144 and 1156 plates and maps.

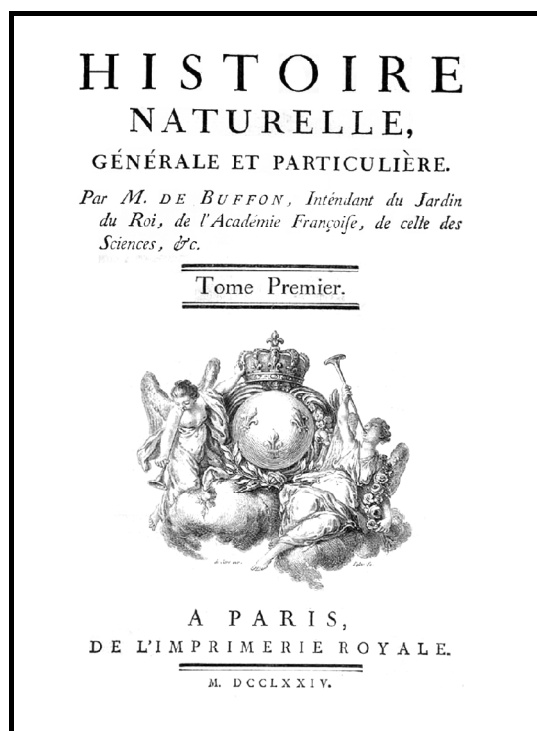
With all the plates in beautiful Dutch contemporary colouring, this work is one of the rarest and most beautifully produced natural history works published in the Netherlands. The list of subscribers which is found in volume 8 lists only 2 coloured large paper copies, one for Daum, banquier à Berlin (pour un exple sur grand Papier & enluminé) and the other one for M.L.P., all others were

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uncoloured. The total number of copies printed did not exceed 200, a few large paper copies were issued and even fewer 'illuminated' copies. The price of a coloured copy was about fl. 600 which makes it one of the most expensive Dutch natural history books of the 18th century. The most expensive work was a coloured copy of Seba at fl. 800.

The present 'l'Allemand' edition is the only quarto edition to rival the original French Imprimerie Royale edition (1749-1804) in 44 volumes. It does not contain the later published volumes by Lacépède on fishes and whales, as these were published after the date of above edition, it however contains numerous additions by l'Allemand which were included in the later French Buffon editions. All plates are after drawings by de Sève, the famous French landscape painter. The animals are depicted in their natural habitat, amidst charming landscapes, villages, rivers, mountains etc. These elaborately drawn plates, full of elegance, became exceedingly popular and have often been copied by later artists. They have an artistic liveliness which is somehow lacking in the the work Martinet made for Buffon's 'Planches Enluminées'. "Buffon's work is of exceptional importance because of its diversity, richness, originality, and influence. Buffon was among the first to create an autonomous science, free of any theological influence. He emphasized the importance of natural history and the great length of geological time" (DSB).

REFERENCES: Landwehr, *Studies in Dutch Books*, 1976: 45. • Nissen (ZBI): no. 678.



HISTOIRE NATURELLE, 1774

966. — French, 1774-9.

Histoire | Naturelle, | Générale Et Particulière.
| Par M. de Buffon, Intendant du Jardin | [...2
lines of titles and memberships...] | [double rule] |
Tome Premier. | [double rule] | [ornament] | A

Paris, | De L'Imprimerie Royale. | [double rule]
| M. DCCLXXIV. [-M. DCCLXXIX.]

4 vols. [VOL 1] 4°: 612 p. (Theorie de la Terre).
[VOL 2] 4°: 542, xxviii p., 16 plates (Introduction de
l'Histoire des Mineraux). [VOL 3] 4°: 564, xxxiv p.
(Parites Experimentale & Hypothetique). [VOL 4] 4°:
615 p., 2 folded maps, 6 folded plates (Epoques de la
Nature). PAGE SIZE: 260 x 210 mm.

VERY SCARCE. A French naturalist and
cosmologist; Buffon (1707-1788) is best noted for his
monumental work *Histoire Naturelle*, published in 44
vols. between 1749 and 1804. His writings contain
an evolutionary theory for animal and plant life, and
most importantly his volume "Epoques de la Nature"
contains the description of the origins of the earth and
other planets from comet impact with the sun and
solidification from a molten state. Buffon points out the
long chronological history of the earth that is recorded
in the rocks. Volumes in the set cover the histories of
the earth, man, animals, plants, and minerals. Many of
the volumes pertain to the quadrupeds. The volumes
offered above are the first edition of those which pertain
to the theory of the earth.

REFERENCES: DSB: 2, p. 579. • Lambrecht &
Quenstedt, *Catalogus*, 1938: p. 99. • LKG: XII 100a*. •
Wallerius, *Brevis Introductio*, 1779: p. 124.

967. — French, 1776.

Histoire naturelle generale et particuliere, servant
de suite a la theorie de la Terre et d'introduction a
l'histoire des mineraux. Paris, 1776.

4 vols. and a supplement. 8°: VERY SCARCE.

REFERENCES: LKG: XIII 125.

968. — French, 1784-85.

Histoire naturelle, générale et particuliere. Lau-
sanne, 1784-85.

17 vols. Containing 3 Frontespices 3 engraved
folded maps and 102 fullpage engravings. [VOL 1] 8°:
[2], Frontespices [portrait of comte de Buffon], [2] 300 p.,
3 folded engraved folded maps [western and eastern
hemisspheres as well as the polar regions]. [VOL 2] 8°:
[3], 292 p. [VOL 3] 8°: [3], 262 p. [VOL 4] 8°: [2],
Frontespice, 308 p. [VOL 5] 8°: [3], 274 p., 16 engraved
mineralogical plates numbered I-XVI. [VOL 6] 8°: [3],
308 p. [VOL 7] 8°: [3], 299 p. [VOL 8] 8°: [3], 440 p.
[VOL 9] 8°: [3], 347 p. [VOL 10] 8°: [2], Frontespice [2],
328 p. [VOL 11] 8°: [3], 276 p. [VOL 12] 8°: [3], 304 p.
[VOL 13] 8°: [3], 240 p. Vols. XIV-XVII contain the
zoological works of Buffon and are numbered as volumes
I-IV. [VOL 14] 8°: (Vol I) [3], 325 p., 7 engraved fullpage
plates of animals. (pl 1, p. 222, pl 2, p. 288, pl 3, p.
309, pl 4,5,6,7, p. 324). [VOL 15] 8°: (Vol II) [3], 303 p.,
35 engraved fullpage plates of animals. [pl. 8,8,9, 30 p.
pl 10. 76 p. pl. 11 - 23, 80 p. pl. 24,24,24,25, 80 p. pl.
26,27,28, 110 p. pl. 29 - 33, 168 p. pl 34, 176 p. pl.
35, 198 p. pl. 37-39, 230 p. pl. 41, 290 p.]. [VOL 16]
8°: (Vol III) [5], 256 p., 32 engraved fullpage plates of
animals. [2 plates in the beginning of the band. 1 pl.
8 p. 1 pl. 14 p. 1 pl. 22 p. 1pl. 26 p. 2 pl. 28 p.

1 pl. 34 p. 1 pl. 56 p. 1 pl. 60 p. 1 pl. 66 p. 1 pl. 78 p. 1 pl. 80 p. 1 pl. 88 p. 1 pl. 92 p. 1 pl. 96 p. 1 pl. 106 p. 1 pl. 110 p. 3 pl. 112 p. 1 pl. 124 p. 1 pl. 134 p. 1 pl. 135 p. 1 pl. 156 p. 1 pl. 178 p. 1 pl. 182 p. 1 pl. 218 p. 1 pl. 224 p. 2 pl. 230 p.]. [VOL 17] 8°: (Vol IV) [3], 224 p., 12 fullpage engraved plates of animals of which one is loose. [1 pl. 86 p. 2 pl. 100 p. 1 pl. 135 p. 1 pl. 158 p. 1 pl. 168 p. 1 pl. 184 p. 1 pl. 202 p. 1 pl. 208 p. 2 pl. 210 p. and one loose plate.].

VERY SCARCE. The text is complete. Buffon's work contains most of the knowledge in natural science of its time. Buffon proves for the first time that the age of our planet must be much older than the 6000 years stipulated in the bible.

969. — French, 1785-90.

Histoire naturelle, generale et particuliere, par m. le comte de Buffon. Deux-Ponts, Chez Sanson & compagnie, 1785-1790.

54 v. : front. (port., v. 1) plates (part col. and part. fold.) fold. maps, fold. tables. VERY SCARCE.

t. 1. De la manière d'étudier & de traiter l'histoire naturelle. Preuves de la théorie de la terre. -t. 2. Preuves de la théorie de la terre (cont.) -t. 3. Histoire generale des animaux. -t. 4. Histoire naturelle de l'homme. -t. 5. Histoire naturelle de l'homme. Discours sur la nature des animaux. Lettres de mm. les députés & syndic de la faculté de théologie à m. de Buffon. Discours prononcé à l'Académie française. Essai de arithmétique morale. Probabilités de la vie. Naissances mariages, &c. -t. 11. Supplément. -t. 12. Epoques de la nature. Supplément. -t. 13. Supplément. Notes. Explication de la art géographique. -t. 14-24. Quadrupèdes. -t. 25. Tables des matières continués dans les oeuvres complètes de m. le comte de Buffon. Quadrupèdes. -t. 26-43. Oiseaux. -t. 44-52. Histoire naturelle des minéraux.

970. — French, 1797.

Histoire naturelle. Paris, Hacquart, 1797-1800.

11 vols., with c350 pages per volume. 8°. One engraved portrait of Buffon, 2 folding tables, 86 engraved plates.

VERY SCARCE. Nicht bei Nissen. Offenbar seltenere Ausgabe des oft aufgelegten zoologischen Standardwerks. Die Kupfer mit den bekannten Tierdarstellungen u.a. nach Drouais, De Seve, N. Blakey und L'Epine.

Histoire Naturelle des Minéraux

971. — French, 1783-8 [4° edition].

Histoire | Naturelle | Des Minéraux. | Par M. le Comte De Buffon, Intendant du | [...2 lines of titles and memberships...] | [double rule] | Tome Premier. | [double rule] | [ornament] | A Paris, | De L'Imprimerie Royale. | [rule] | M. DCCLXXXIII.

5 vols. [VOL 1: 1783] 4°: [4], [1]-557, [1] blank, i-xl p.; [VOL 2: 1783] 4°: [4], [1]-602, i-xxvi p.; [VOL 3: 1785] 4°: [6], [1]-636, i-xix, [1] blank p.; [VOL 4: 1786] 4°: [6], [1]-448, i-xxxix, [1] blank p.; [VOL 5] 4°: [i]-vii, [1] errata, [1]-208, [1]-368 p.; [Supplement I] 4°: viii, 615, xxviii p., 6 plates. PAGE SIZE: 252 x 192 mm.

HISTOIRE NATURELLE DES MINÉRAUX.

Par M. le Comte DE BUFFON, Intendant du
Jardin & du Cabinet du Roi, de l'Académie
Françoise, de celle des Sciences, &c.

Tome Premier.



A PARIS,
DE L'IMPRIMERIE ROYALE.
M. DCCLXXXIII.

HISTOIRE NATURELLE DES MINÉRAUX, 1783 (4° ED.)

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Table des Titres Contenus dans ce Volume."; [1]-557, Text.; [1 pg], Blank.; i-xl, "Table des Matière contenues dans ce Volume."

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], "Table des Articles Contenus dans ce Volume."; [1 pg], Blank.; [1]-602, Text.; i-xxvi, "Table des Matière contenues dans ce Volume."

[Vol 3] [2 pgs], Title page, verso blank.; [3 pgs], "Table des Articles Contenus dans ce Volume."; [1 pg], Blank.; [1]-636, Text.; i-xix, "Table des Matière contenues dans ce Volume."; [1 pg], Blank.

[Vol 4] [2 pgs], Title page, verso blank.; [4 pgs], "Table des de ce qui est Contenu dans ce Volume."; [1]-448, Text.; i-xxxix, "Table des Matière contenues dans ce Volume."; [1 pg], Blank.

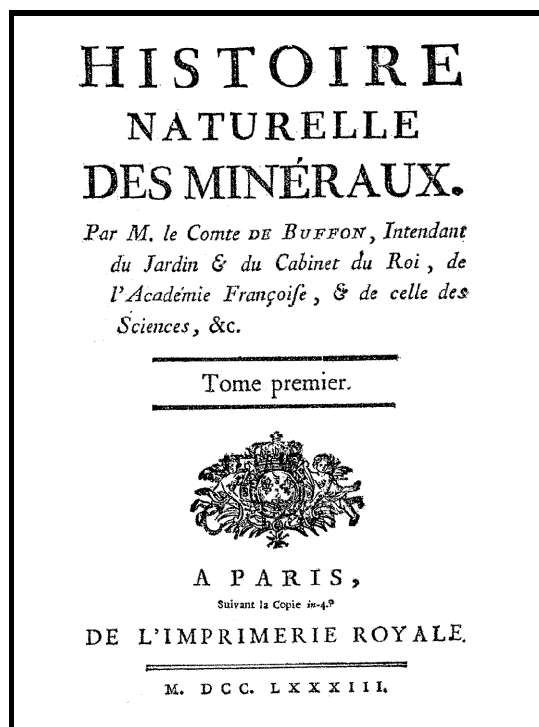
[Vol 5] [i-ii], Half title page, "Histoire Naturelle des Minéraux. Tome V. Traité de l'Aimant et de ses Usages," verso blank.; [iii-iv], Title page, verso blank.; [v]-vii, "Table des Articles contenus dans ce Volume."; [1 pg], Errata.; [1]-192, "... Traité de l'Aimant et de ses Usages."; 193-208, "Table des Matières."; [1]-368, "Table Contenant les Observations qui ont été faites, dans ces derniers tens, sur la Déclinaison de l'Aiguille aimantée."

VERY SCARCE. 5 vol., first edition of this part, bound without the plates, some clear waterstains but a sound copy in contemporary mottled calf, gilt spines, m.e., much worn, joints cracked, head of spines defective and some other worn patches, Paris, Imprimerie Royale, 1783-88 As the BM(NH) Cat. notes (I, 281) vol. 5 comprises a treatise on the magnet, and thus of the compass. There is no list of plates or any other indication that they should be present, but Nissen 672 calls for 8 plates and a map in this portion. In fact

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there should be 8 folding maps in total, and they apply to the magnet volume only; later editions do have plates of minerals.

REFERENCES: DSB: 2, 579 [by Jacques Roger]. • *English Review*: 5, 64-71 & pp. 289-295. • *Freilich Sale Catalog*: no. 108. • Lambrecht & Quenstedt, *Catalogus*, 1938: p. 99. • LKG: XII 100. • Wallerius, *Brevis Introductio*, 1779: 124.



HISTOIRE NATURELLE DES MINÉRAUX, 1783 (8° ED.)

972. — French, 1783 [8° edition].

Histoire | Naturelle | Des Minéraux. | Par M. le Comte de Buffon, Intendant | [...3 lines of titles and memberships...] | [rule] | Tome premier. | [rule] | [ornament] | A Paris, | Suivant la Copie in-4.° | De L'Imprimerie Royale. | [double rule] | M. DCC. LXXXIII.

8 vols?. [VOL 1: 1783] 8°: π^2 A-S¹² T³; ??ℓ.; [4], [1]-438 p. [VOL 2: 1783] 8°: π^2 A-S¹² T¹¹; ??ℓ.; [4], [1]-392, i-lxii p. [VOL 3: 1784] 8°: π^2 a¹ A-T¹² V⁸; ??ℓ.; [i]-vi, [1]-471, [1] p. [VOL 4: 1784] 8°: π^2 a¹ A-Q¹² R¹⁰; ??ℓ.; [6], [1]-365, [1], [i]-xxxvii, [1] p. [VOL 5] 8°: Not seen. [VOL 6: 1785] 8°: π^2 a² A-Q¹² R¹⁰; ??ℓ.; [8], [1]-404 p. [VOL 7] 8°: Not seen. [VOL 8] 8°: Not seen. PAGE SIZE: 164 x 100 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Titres | Contenus dans ce Volume."; [1]-438, Text.

[Vol 2] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Titres | Contenus dans ce Volume."; [1]-392, Text.; i-lxii (=R5-T11), "Table | Des Matières contenues dans | ces deux Volumes."

[Vol 3] [i-ii], Half title page, "Histoire | Naturelle | Des Minéraux | [rule] | Tome troisième. | [rule]," verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "Table | Des Articles | Contenus dans ce Volume."; [1]-471, Text.; [1 pg], Blank.

[Vol 4] [2 pgs], Half title page, "Histoire | Naturelle | Des Minéraux | [rule] | Tome Quatrième. | [rule]," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], "Table | Des Articles | Contenus dans ce Volume."; [1]-365, Text.; [1]+i-xxxvii, "Table | Des Matières | Contenus dans les Tomes III & IV (the first page is not numbered so it is 38 pages long of which pages 2-38 are numbered i-xxxvii)."

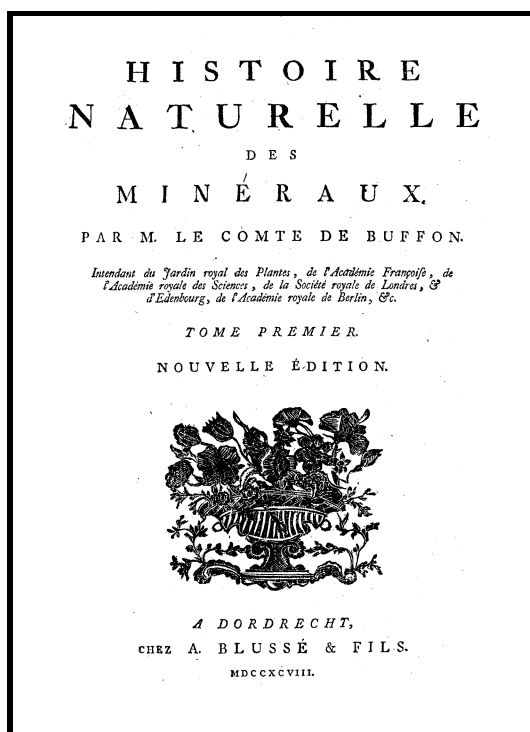
[Vol 5] Not seen.

[Vol 6] [2 pgs], Half title page, "Histoire | Naturelle | Des Minéraux | [rule] | Tome Sixième. | [rule]," verso blank.; [2 pgs], Title page, verso blank.; [4 pgs], "Table | Des Articles | Contenus dans ce Volume."; [1]-336, Text.; 337-374, "Arrangement Des Minéraux | En Table Méthodique."; 375-404, "Table | Des Matières | Contenus dans les Tomes V & VI."

[Vol 7] Not seen.

[Vol 8] Not seen.

RARE, octavo edition of Buffon's writings. The two volumes contain the following chapters a.o.: De la figuration des minéraux, verres primitifs, quartz, jaspe, mica & talc, feld-spath, schorl, roches vitreuses, granit, grès, argilles & glaises, craie, marne, pierre calcaire, albatre, marbre, pierres composées de matière vitreuses



HISTOIRE NATURELLE DES MINÉRAUX, 1798

973. 1798-9: Historire | Naturalle | Des | Minéraux. | Par M. Le Comte De Buffon. | [...3 lines of titles and memberships...] | Tome Premier. | Nouvelle Édition. | [ornament] | A Dordrecht, | chez A. Blussé & Fils. | MDCCXCVIII.

[TITLE PAGE OF VOLUME 5 READS:]

Historie Naturelle | Des Minéraux. | [double rule] | Tome V. | [double rule] | Traité De L'Aimant | Et De Ses Usages, | Par M. Le Comte De Buffon. | [...3 lines of titles and memberships...] | Nouvelle Édition. | [ornament] | A Dordrecht, | chez A. Blussé & Fils. | MDCCXCIX.

5 vols. bound in 2. [VOL 1: 1798] 4°: π^2 A-Z⁴ 2A-2G⁴ 2H-2K² 2L¹; 129ℓ.; [4], [1]-253, [1] p.; [VOL 2: 1798] 4°: π^2 A-Z⁴ 2A-2I⁴ 2K³; 133ℓ.; [4], [1]-262 p.; [VOL 3: 1798] 4°: π^2 A-Z⁴ 2A-2L⁴ 2M³; 141ℓ.; [4], [1]-277, [1] p.; [VOL 4: 1798] 4°: π^2 A-Z⁴ 2A-2C⁴ 2D²; 104ℓ.; [4], [1]-204 p.; [VOL 5: 1799] 4°: π^2 A-Z⁴ 2A-2S⁴; 162ℓ.; [4], [1]-324 p., 8 large folding maps. PAGE SIZE: 254 x 202 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Titres | Contenus Dans Ce Volume."; [1]-239, Text.; 240-253, "Table Des Matières."; [1 pg], Blank.

[Vol 2] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Titres | Contenus Dans Ce Volume."; [1]-253, Text.; 254-262, "Table Des Matières."

[Vol 3] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Titres | Contenus Dans Ce Volume."; [1]-253, Text.; 254, "Arrangement Des Minéraux, | En Table Méthodique, | Rédigée d'après la connoissance de leurs propriétés naturelles."; 255-270, "Table Méthodique Des Minéraux."; 271-277, "Table Des Matières."; [1 pg], Blank.

[Vol 4] [2 pgs], Title page, verso blank.; [2 pgs], "Table | De Ce Qui Est Contenu Dans Ce Volume."; [1]-190, Text.; 191-204, "Table Des Matières."

[Vol 5] [2 pgs], Title page, verso blank.; [2 pgs], "Table Des Articles | Contenus Dans Ce Volume."; [1]-80, Text.; 81-87, "Table Des Matières."; [88]-322, "Tables | Contenant les Observations qui ont été faites, dans ces derniers tems, | sur la Déclinaison de l'Aiguille aimantée."; 323-324, Text, ending with "Approbation."

VERY SCARCE. Perhaps the greatest publication of the French enlightenment of the 18th century was Buffon's *Histoire Générale et Particulière* (1st ed., 44 vols., Paris, 1744-1804). "Buffon's work is of exceptional importance because of its diversity, richness, originality, and influence. Buffon was among the first to create an autonomous science, free of any theological influence. He emphasized the importance of natural history and the great length of geological time. He envisioned the nature of science and understood the roles of paleontology, zoological geography, and animal psychology. He realized both the necessity of transformism and its difficulties. Although his cosmogony was inadequate and his theory of animal reproduction was weak, and although he did not understand the problem of classification, he did establish the intellectual framework within which most naturalists up to Darwin worked" (DSB).

This encyclopedia work provided comprehensive coverage of all aspects of natural history, including the realm of minerals. In the first edition, mineralogy was covered in five original volumes together with three supplemental tomes. In this 'Nouvelle Édition' the five original volumes have been bound up into two physical books. The minerals are arranged according to a scheme that assigns them to three classes of rock. Namely, (1) those created by primitive fire (=igneous rocks), (2) those created by secondary actions of heat like basalts, lava and ash deposits, and (3) those created by sedimentary processes. The first volume begins with the classification scheme and includes quartz, jasper, mica, talc, fluorite, tourmaline, granite, schist, alabaster, marble, and others. The second volume describes a wide variety of 'secondary' types including volcanic ejecta, salts, sulfur, alkalis, niter, borax, iron gold, etc. Volume three contains descriptions various metals and their minerals including lead, copper, silver, mercury, antimony, bismuth, zinc, platinum, cobalt, etc., as well as descriptions of stalactites, quartz crystals, various gemstones, and concluding the volume a tabular arrangement of the minerals according to their physical properties. Volume four contains descriptions of jaspers,

concretions, jade, serpentine, turquoise, petrifications & fossils, zeolites, pyrites, hematite, etc. The fifth volume describes magnets and magnetism especially as it applies to the earth's magnetic field. Accompanying this volume are a large number of tables listing various voyages, dates, longitude and latitudes.

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 1036.

974. Abridged translation, 1784: *Naturgeschichte der Mineralien Buffon*. Eine freie mit einigen Zusätzen vermehrte Übersetzung [von Christian Ernst Wünsch]. Frankfurt & Leipzig, Verlagskasse, 1784.

8°: ix, 486 p.

VERY SCARCE. Translated by Christian Ernst Wünsch (1744-1828).

REFERENCES: DSB: 2, p. 579. • Lambrecht & Quenstedt, *Catalogus*, 1938: p. 99. • LKG: XII 101a & XIII 269. • Wallerius, *Brevis Introductio*, 1779: p. 124.

975. 1778: *Storia naturale generale e particolare per servire di seguito alla teoria de minerali del Sig. Conte de Buffon*. Milano, 1778.

2 vols. and a supplement. VERY SCARCE.

REFERENCES: LKG: XIII 126.

976. English transl., 2nd edition, 1792: *Natural History, general and particular, by the count de Buffon, translated into english ...* London, 1792.

9 vols. 8°: VERY SCARCE.

977. — English, 1792.

Buffon's *Natural History*, Abridged. Including the history of the elements, the earth, mountains, rivers, seas, winds, whirlwinds, waterspouts, volcanoes, earthquakes, man, quadrupeds, birds, fishes, shell-fish, lizards, serpents, insects, and vegetables. London, Published for C. and G. Kearsley, 1792.

2 vols. [VOL 1] 8°: xl, 353 p. [VOL 2] 8°: 493 p. Illustrated with copper engravings, of which a few are folding plates: 107 numbered plates, engraved title-pages in each volume, and a frontispiece in volume 1. VERY SCARCE.

978. Another English edition, 1807: Buffon, Georges Leclerc, Comte de Buffons *Natural History*. London, H.D. Symmonds, 1807-1808.

16 vols. 12°: 130 full page hand coloured plates.

VERY SCARCE. Each volume is signed by Thomas Peacock, who bought the books new and had them bound for his private collection.

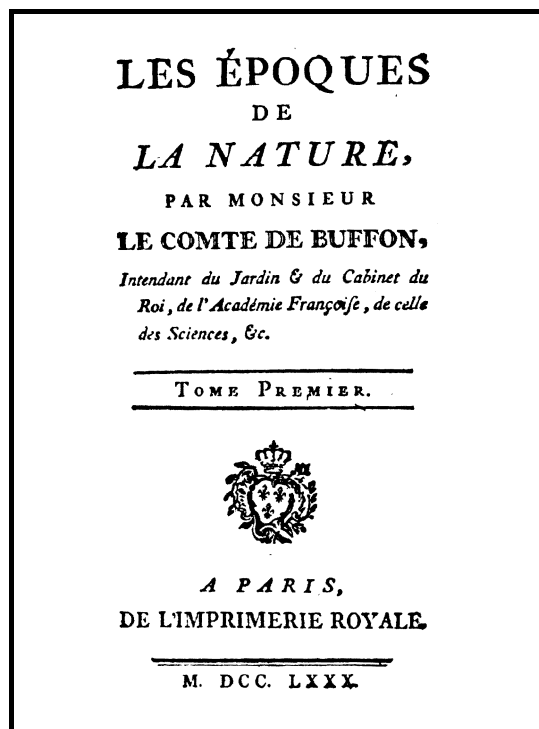
Containing a theory of the earth, a general history of man, of the brute creation, and of minerals, vegetables, etc. (10 volumes). Together with; natural history of birds, fishes, insects and reptiles (6 volumes). Sixteen volumes uniformly bound in contemporary early 19th Century half leather onto marbled boards; the spines have six gilt edged panels with contrasting red and/or orangey brown title labels with green leather volume indicators. The set is the complete Barrs edition.

London, H.D. Symmonds, 1807-1808 respectively. This set contains a total of 130 full page hand coloured plates. 12 mo.

A scarce and complete set of this English translation of the famous French work published earlier in Paris: *Histoire Naturelle, Generale et Particuliere, Avec la Description du Cabinet du Roi*.

979. — French, 1780 [First separate edition].

Les Époques | De | La Nature, | Par Monsieur | Le Comte De Buffon, | [...3 lines of titles and



LES ÉPOQUES DE LA NATURE, 1780

memberships... | [rule] | Tome Premier. [-Second.]
| [rule] | [ornament] | A Paris, | De L'Imprimerie
Royale. | [double rule] | M. DCC. LXXX.

2 vols. in one. 12°: [4], 246 p.; [4], 264 p., 6
engraved plates and 2 folding maps. PAGE SIZE: 166 x
93 mm.

VERY RARE. One of the great milestones in the
history of earth science, in which Buffon suggest for the
first time the great age of the earth. Buffon was an
extremely influential French natural philosopher whose
extensive works included one of the last speculative
cosmogonies: *Les Époques de la Nature* (1778).
Beginning with the formation of the Earth, it covered
seven epochs in analogy to the seven days of Creation.
He proposed that the Earth was hot at its creation and,
from the rate of cooling, calculated its age to be more
than 100,000 years.

This is the first separate edition, of a text that
first appeared in quarto in the fifth volume of the
Suppléments, to Buffon's *Histoire Naturelle* in 1778. In
this 12° edition the notes are incorporated as footnotes
(having been relegated to the end of the book in the
quarto edition), and there is a new Table Alphabétique.

REFERENCES: Dibner, *Heralds of Science*, 1955: 193. •
LKG: XIII 127b. • PPM: *Printing and the Mind of Man*: 198.
• Sparrow, *Milestones of Science*, 1972: p. 23. • Wellcome
Catalog (Books): 2, 268.

980. German transl., 1781: *Epochen der Natur*. A. dem Franz.
von I.J. Hackmann. Petersburg und Leipzig, 1781.

2 vols. 8°: VERY SCARCE.

REFERENCES: LKG: XIII 128c.

981. 1781: *Epochen der Natur*. A. dem Franz. von I.J.
Hackmann. Petersburg und Leipzig, 1781.

2 vols. VERY SCARCE.

982. 1787: *Epochen der Natur*. Polish translation.
Warschau, 1787.

2 vols. VERY SCARCE.

983. 1793: *Epochen der Natur*. English translation. 1793.
8°: VERY SCARCE.

984. — French, 1804.

Oeuvres. Paris (Crapart, Caille et Ravier), 1804.

Large 8 |. ca 3600 S. mit 1 Kupfertafel und 2
gestochenen Faltkarten (Bd.1); 3 Kupfertafeln (Bd. 3);
43 Kupfertafeln (Bd. 4-6); 34 Kupfertafeln (Bd. 7-9).

VERY SCARCE. Complete in 9 volumes which
are: (1) Life of Buffon, (2) *Histoire des Minéraux*, (3)
Histoire de l'Homme, (4-6) *Histoire des Quadrupèdes*,
and (7-9) *Histoire des Oiseaux*.

985. — French, 1805.

Histoire Naturelle, | Generale Et Particulare,
| Par Leclerc De Buffon; | Nouvelle Edition,
accompagnée de Notes, et dans laquelle | ...
FINISH TITLE ... | Redigé Par C.S. Sonnini, |
Membre De Plusieurs Sociétés Savantes. | Tome
Premier. | [ornament] | A Paris, | De L'Imprimerie
De F. Dufart. | [rule] | An VIII.

16 vols. VERY SCARCE.

986. 1819: Oeuvres | Complètes | De Buffon, | mises en
ordre | Par M. Le Comte De Lacepède. | Seconde Édition.
| Tome Premier. | [ornament] | A Paris, | Chez Rapet, Rue
Saint-André-Des Arcs, N° 4. | [short rule] | M. DCCC.
XIX.

25 vols. Together 18 vol., first part with portrait, 4
folding maps (sl. tear at fold, without loss), 213 engraved
plates, 1817-18, second part with portrait, engraved title,
115 engraved plates, 1819. PAGE SIZE: 205 x 135 mm.

SCARCE. This edition of Buffon is complete in 12
volumes; it seems not to be in Nissen, though at 2348c
& 2350d he has the Lacepède with the same plate collation
as here; the plates for this are after drawings by Pretre.

987. — French, 1825-8.

Oeuvres complètes de Buffon. Paris, A. Eymery,
1825-1828.

26 vol. in-8, basane racinée, dos lisse orné (reliure
de l'époque).

VERY SCARCE. Édition illustrée de 245 planches,
la plupart en couleurs et du portrait de Buffon.
Le Tableau gravé de tous les animaux nouvellement
découverts n'a pas été tité pour cette édition. Édition
enrichie d'une vue générale des progrès de plusieurs
branches des sciences naturelles, et mis en ordre par
Lacépède. Augmenté d'un volume contenant le précis
des merveilles de la nature, découvertes depuis Buffon
jusqu'à nos jours.

988. — French, 1827.

Oeuvres complètes de Buffon mises en ordre
et précédées d'une notice historique par M.A.
Richard, professeur agrégé à l'université de Paris,
suivies de deux volumes sur les progrès des sciences

physiques et naturelles depuis la mort de Buffon par M. le baron de Cuvier. Paris, Delangle frères, 1827-1828.

34 vols. 8°: With 2 engraved frontispieces, one portrait of Buffon and 193 fine handcoloured engraved plates, 9 plain plates and 4 folded maps. Contemporary red half morocco, richly gilt ornamented spines. A beautiful uniformly bound copy of this large and attractively illustrated edition of Buffon. PAGE SIZE: 221 x 140 mm.

VERY SCARCE. The fine plates are by Vauthier and engraved by various engravers. 75 of the coloured plates show mammals, and 118 birds. The set is composed as follows: Vol. 1. Discours académiques - Histoire naturelle - Théorie de la Terre; 2. Théorie de la terre; 3-4. Minéraux; 5. Des époques de la Nature; 6-9. Minéraux; 10. Expériences sur les végétaux - Animaux; 11. Animaux - De l'homme; 12. De l'homme; 13-19. Animaux; 20-28. Oiseaux; 29-32. Compléments; 33-34. Atlas. Nissen ZBI, 696; Piveteau 168.

989. — French, 1828.

Oeuvres complètes, suivies de ses continuateurs Daubenton, Lacépède, Cuvier, Duméril, Poirer, Lesson et Geoffroy-St-Hilaire. Bruxelles, Th. Lejeune, 1828.

14 vols. 8°: (2) 484; (4) 483; (4) 503; (4) 501; (6) 440; (4) 471; (4) 492; (4) 490; (4) 396; (4) 340; (4) 470; (4) 476; (4) 408; (4) 415. Illustrated with 5 portraits, 2 folding plates, 733 plates of which 437 are hand coloured and some are heightened with gold.

VERY SCARCE. Complete set of Buffon's (1707-1788) "Oeuvres Complètes". The fine lithographed plates are printed on special paper and many are in beautiful contemporary handcolouring.

990. 1838: Oeuvres complètes de Buffon, avec des extraits de Daubenton, et la classification de Cuvier. Paris, Furne et Cie., 1838-1839.

6 vols. [VOL 1] 8°: [VOL 2] 8°: [VOL 3] 8°: [VOL 4] 8°: [VOL 5] 8°: [VOL 6] 8°: With 1 portrait of Buffon, 5 partly coloured maps and 115 fine handcoloured plates, of which many by E. Traviès. PAGE SIZE: 260 x 180 mm.

VERY SCARCE. The present work in one of the many edition of Buffon's famous 'Histoire Naturelle' which was planned as a comprehensive iconography of the animal kingdom. The work is composed as follows: Vols. 1 & 2: Théorie de la Terre; Vols. 3-4: Mammifères; Vols. 5-6: Oiseaux.

REFERENCES: Nissen (ZBI): 700 [quoting an earlier edition by the same publisher].

991. 1851: Oeuvres complètes de Buffon ... cinquième édition. Paris, Societe des publications illustree, 1851.

6 vol., portrait frontispiece, 4 maps in outline colour, 166 hand coloured plates, by Travies and others, tables.

VERY SCARCE. Nissen 702, a later issue.

992. — French, 1853.

Oeuvres complètes de Buffon avec la nomenclature Linnéenne et la classification de Cuvier. Revues sur l'édition in-4to de l'Imprimerie Royale et annotées par M. Flourens. Paris, Garnier Frères, (1853-1857).

12 vols. 4to. With an engraved frontispiece, an engraved portrait of Buffon and 163 engraved handcoloured plates. PAGE SIZE: 265 x 170 mm.

VERY SCARCE. "The title-page truthfully states this to be a new edition illustrated by engravings after drawings by Traviès and Henry Gobin and coloured with the greatest care. It is one of the best editions of this master placed upon the market, albeit among the rarest" (Wood 269). Contents: Vol. I. Théorie de la terre, Histoire générale des animaux; Vol. II. L'homme, les quadrupèdes; Vol. III. Les quadrupèdes; Vol. IV. Les singes, additions aux quadrupèdes; Vols. V-VIII Oiseaux; Vols. IX-XI. Minéraux; Vol. XII. Expériences sur les végétaux, arithmétique morale et Tables analytiques et raisonnées des matières contenues dans l'ouvrage entier.

BUFFON OEUVRES COMPLETES MONUMENTAL OUVRAGE COMPLET EN 12 VOLUMES GRAND IN-8 AVEC LA NOMENCLATURE LINNEENNE ET LA CLASSIFICATION DE CUVIER ANNOTEES PAR M. FLOURENS BELLE RELIURE 1/2 CHAGRIN NOIR A COINS, EN BON ETAT, DOS A 4 FAUX NERFS, TITRES ET TOMAISONS DORES, PLATS (BLEUTES) ET COINS EN BONS ETATS. GARNIER, 1853-1855

TOME 1 THEORIE DE LA TERRE 1 frontispice, 2 cartes+ 2 planches rousseurs éparses, un léger accident en tête 681pp+ table des matières

TOME 2 MAMMIFERES I tableaux, tables, 28 planches rousseurs éparses, 2 petits accidents au dos, papier des plats marginalement frottés 664pp+ table des matières

TOME 3 MAMMIFERES II 30 planches rousseurs éparses 594pp+ table des matières

TOME 4 MAMMIFERES III tableaux, 22 planches rousseurs éparses, tres légère griffure au second plat 673pp+ table des matières

TOME 5 OISEAUX I 18 planches rousseurs éparses 592+ table des matières

TOME 6 OISEAUX II 17 planches rousseurs éparses, 2 coins cognés 574pp+ table des matières

TOME 7 OISEAUX III tableaux, 17 planches rousseurs éparses 642pp+ table des matières

TOME 8 OISEAUX IV 17 planches rousseurs éparses 621pp+ table des matières

TOME 9 MINERAUX I tableaux, 4 planches+ 2 cartes 668pp+ table des matières

TOME 10 MINERAUX II rousseurs éparses 568pp+ table des matières

TOME 11 MINERAUX III tables 606pp+ table des matières

Tome 12 VEGETAUX tableaux 821pp dont table des matières+ notice sur Buffon

AU TOTAL 163 GRAVURES SUR ACIER REPRESENTANT 800 SUJETS COLORIES AVEC LE PLUS GRAND SOIN ; DESSINS DE VICTOR ADAM

993. 1866-7: Buffon. Oeuvres complètes avec des extraits de Daubenton et la classification de Cuvier. Lacépède, (Bernard de La Ville). Histoire naturelle de Lacépède comprenant les cetaces, les quadrupèdes ovipares, les serpents et les poissons. Nouvelle édition précédée de l'éloge de Lacépède par Cuvier, avec des notes et la nouvelle classification de A.-G. Desmarests. Paris, Chez Furne-Jouvet, 1866-1867.

8 vols. 4°: 782 / 775 / 784 / 653 / 653 / 726 S.; 668 / 647 S. 1 gest. Portrait, 5 Karten und 122 handkolor. Stahlstichtafeln von Werner, Janet-Lange u.a.; 36 handkolor. Stahlstichtafeln nach Edouard Traviès. Dunkelblaues Halbleder der Zeit mit Rückenvergoldung.

VERY SCARCE. Beautiful, large sized format, with bright hand-colored illustrations. The two supplemental volumes of Lacépède are usually missing from the set.

BÜNTING

Volume 1: Theorie de la Terre ; Volume 2 : Histoire naturelle des mineraux ; Volumes 3 et 4 : Mammiferes ; Volumes 5 et 6 : Oiseaux ; Volume 7 : les cetaces; les quadrupedes ovipares, les serpents; Volume 8 : les poissons.

REFERENCES: Nissen (ZBI): no. 2346. • Wood, *Literature of Vertebrate Zoology*, 1931: 424.

994. — German, 1756.

Naturl. Geschichte d. Erdbebens und der feuer-speienden Berge, a. Buffon's Histoire der Natur ubers. Breslau, 1756.

8°: VERY SCARCE.

995. — Spanish, 1832-5.

Obras | Completas | De Buffon, | Aumentadas | ... FINISH TITLE ... | Y Dedicadas A.S.M. la Reina Ntra. Sra. (O.D.G.) | [ornate rule] Discursos Preliminares. | Tomo I. | [ornate rule] Barcelona. | Impr. De A. Bergnes Y Ca., Calle De Escudellers. | Con Licencia. Julio De | 1832.

17 vols. VERY SCARCE.

996. — English, 1812.

Natural History, General and Particular. Illus. with over 600 copper plates. The History of Man and Quadrupeds. Transl. with Notes and Observations by William Smellie. A New Edition, corrected and enlarged, by many additional articles, notes and plates; and, Some Account of the Life of M. de Buffon, by William Wood. London, 1812.

20 vols. VERY SCARCE.

997. — Russian, 1826.

Vseobsjtsjaja i castnaja estestvennaja istorija St. Petersburg, Akademija nauk, 1826, 1811.

2 parts in one volume. 4°: [4], 374, [4] p.

VERY SCARCE. Russian edition of one of the most popular works in Europe on natural history by George Louis Leclerc, Comte de Buffon (1707-1788). Since it's first appearance at the end of the 18th century, the encyclopedic Histoire Naturelle, had been translated into several languages.

Lettre du Duc de Noya Carafa sur la Tourmaline, à Monsieur de Buffon ... (Paris, 1759).

See: Carafa, Giovanni, *Duca Di Noja*.

998. — French, 1798-1808.

Histoire naturelle, générale et particulière, par Le Clerc de Buffon. Nouvelle éd., accompagnée de notes, et dans laquelle les suppléments sont insérés dans le premier texte, à la place qui leur convient. L'on y a ajouté l'histoire naturelle des quadrupèdes et des oiseaux découverts depuis la mort de Buffon, celle des reptiles, des poissons, des insectes et des vers; enfin, l'histoire des plantes dont ce grand naturaliste n'a pas eu le tems de s'occuper. Ouvrage ... rédigé par C. S. Sonnini. Paris, Chez F. Dufart, An VIII [1798]-1808.

127 vols., maps, plates, tables. VERY SCARCE.

CONTENTS: t.1-3. Théorie de la terre.—t.4. Époques de la nature.—t.5-16. Minéraux.—t.17-18. Animaux.—t.19-21. L'homme.—t.22-34. Quadrupèdes.—t.35-36. Singes.—t.37-64. Oiseaux.—t.[65]-[72] Reptiles ... par F. M. Daudin.—t.[73]-[78] Mollusques ... par Denys-Montfort ... continué par Felix de Roissy.—t.[79]-[92] Crustacés et insectes ... par P. A. Latreille.—t.[93]-[105] Poissons ... par C. S. Sonnini.—t.[106] Cétacées ... par C. S. Sonnini.—t.[107]-[124] Plantes ... par C. F. Brisseau-Mirbel.—t.[125]-[127] Tables analytiques et raisonnées des matières et des auteurs ... par P. Sue.

REFERENCES: Nissen (ZBI): 682.

999. — French, 1771.

Manuel | Du | Naturaliste. | Ouvrage | Utile aux voyageurs, & à ceux qui | visitent les Cabinets d'Histoire Natu- | relle & de Curiosités, en forme de dictionnaire, pour servir de suite à | l'Histoire Naturelle. | Par | M.deBuffon, de l'Académie Française, | &c., &c., Intendant du Jardin du Roi. | Tome Premier. | [ornament] | A Paris. | De l'Imprimerie Royale. | [ornament] | M. DCC. LXXI.

2 vols. PAGE SIZE: 170 x 100 mm.

VERY SCARCE. This is actually written by Duchesene and Macquer.

BÜNTING, Philipp Johann.

1000. — Latin, 1693.

Sylva | Subterranea | Oder: | Vortreffliche Nutzbarkeit | Des | Unterirdischen Waldes | Der | Stein=Kohlen/ | Wie dieselben von Gott denen | Menschen zu gut/ an denenjenigen | Orthen/ wo nicht viel Holtz wächst/ | aus Gnaden verliehen und mit= | getheilet worden/ | Auff Hoher Patronen Befehl | und Curiosität entworfen | und Zum Druck befördert | von | Johann Philipp Buntingen/ | LL. St. Wett. Sax. | [rule] | Halle/ Gedruckt von Christoph | Salfelden/ Churfl. Brandenbl. Hoff= und | Regier. Buchdr. im Herzogt. Magd. 1693.

12°: A-F¹² G¹¹)⁽⁹; 93ℓ.; [1]-166, [20] p.

CONTENTS: [1-2/(=A1), Title page, verso blank; [3]-14 (=A2r-A7v), Dedication.; [15]-24 (=A8r-A12v), "Vorrede."; [25]-29 (=B1r-B3r), Contents with the text starting immediately after on page 29.; 29-166 (=A1r-F12v, G11), Text.; [19 pgs/(=)(1r-)(9r), "Appendix."; [1 pg], Blank.

RARE. An economic mineralogy describing primarily the coal regions of Germany.

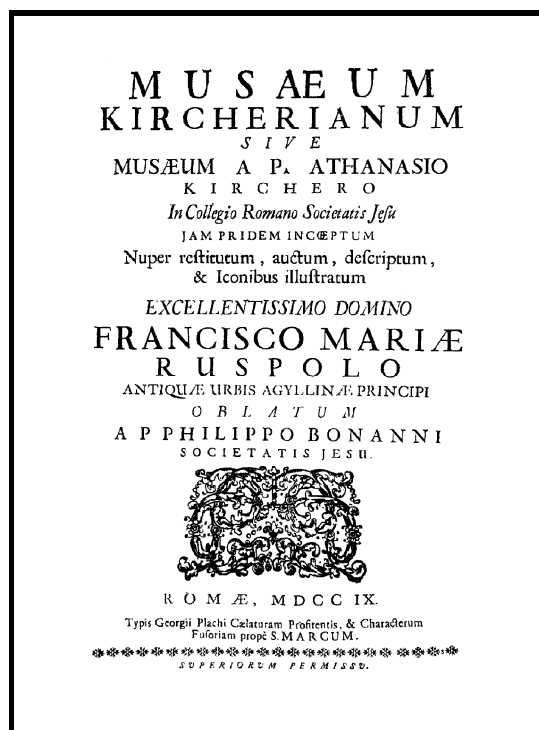
REFERENCES: LKG: XVII 156. • Roller & Goodman, *Catalogue*, 1976: 1, 182. • VD17: 39:117886K.

BUONANNI (Bonanni), Filippo. (BORN: Rome, Italy, 7 January 1638; DIED: Rome, Italy, 30 March 1725) *Italian theologian & conchologist*.

Buonanni entered the Jesuits in 1654 and became a pupil of Athanasius Kircher at the Collegio Romano. After completing his education, Buonanni taught first in the Jesuit college in Orvieto and then in the one in Ancona. He was called back to Rome in 1676 to be the Archivist of the Casa Professa, Il Gesua. He was appointed Rector of the College of the Maronites in Rome, 1695-1725. In 1698, he also accepted an appointment as the

curator of the Kircherian Museum at the Collegio Romano. Buonanni collected shells of sea life, which he classified and interpreted within an Aristotelian framework. He believed in their spontaneous generation. Some of his observations employed a microscope, which he had built himself.

REFERENCES: ABI: I 175, 144-160; II S 12, 51-54. • *Biographie Universelle*. • *Dizionario Biografico Italiani*: 15, 142-4 [by P. Omodeo; other refs.]. • DSB: 2, 591-2 [by P. Franceschini]. • Eitner, *Quellenlexikon*, 1959. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • *Nouvelle Biographie Générale* (Hoefer). • Neviani, A., "Un episodio della lotta fra spontaneisti ed ovulisti. Il Padre Filippo Buonanni e l'Abate Anton Felice Marsili," *Rivista di storia delle scienze mediche e naturali*, 26 (1935), 211-32. • Poggendorff: 1, cols. 341-2. • WBI.



MUSEUM KIRCHERIANUM, 1709

1001. — Latin, 1709 [First edition].

Musæum | Kircherianum | Sive | Musæum A
P. Athanasio | Kirchero | In Collegio Romano
Societatis Jesu | Jam Pridem Incæptum | Nuper
restitutum, auctum, descriptum, | & Iconibus
illustratum | Excellentissimo Domino | Francisco
Mariæ | Ruspolo | Antiquæ Urbis Agyllinæ
Principi | Oblatum | A P. Philippo Bonanni |
Societatis Jesu. | [Printer's device] | Romæ, MDCC
IX. | Typis Georgii Plachi Cælaturæ Profitentis,
& Characterum | Fusoriam propè S. Marcum. |
[ornate rule] | Superiorem Permissv.

2°: *⁶ A-G⁴ H² I-N⁴ O⁶ P-T⁴ V⁶ X-Z⁴ Aa⁴ Bb-
Cc⁶ Dd-Gg⁴ Hh⁶ Ii-Zz⁴ ²Aa⁶ ²Bb⁴; 203ℓ.; [12], 1-
39, 61-79, 84-115, 128-146, 161-183, 198-224, 225-247,

264-283, 302-312, 316-319, 322-361, 392-411, 412-522,
[7] p., frontispiece (portrait of Ruspolo), 172 plates
(part folding). The erratic collation/pagination of
this volume results from the plates being included as
numbered leaves between various groups of text pages.
PAGE SIZE: 361 x 238 mm.

PLATES: Frontispiece portrait of Ruspolo engraved by
Arnold van Westerhout after Antonio David.

RARE. First detailed and illustrated catalog of
the famous Museum Kircherianum of the Jesuit Colle-
gio Romano after its rebirth in the early 18th century.
GIORGIO DE SEPI had previously published a glimpse of
the Museum at its height in 1678. Kircher had originally
built the collection on a collection previously assembled
by Alfonso Donnino [—1651], and utilized the net-
work of Jesuit missionaries to provide new specimens of
natural and ethnographic wonders from all the lands of
the world. Kircher also had a passion for Egyptian an-
tiquities including two authentic mummies, a collection
of exotic shoes, and the first cuneiform tablet recorded
in Europe. However, after Kircher's death in 1680 the
collection languished for years before Buonanni was ap-
pointed curator.

Buonanni resurrected the collection and revital-
ized its importance by moving it to a new building and
again adding extensively to its contents. Here he pro-
vides a detailed account of the objects and the genesis
of the museum. As a conchologist himself, he devotes a
large part of the text and 48 plates to illustrating 412
specimens of shells. There is also a section devoted to
microscopes and microscopic views. Buonanni's catalog
gives a good idea of the museum contents contained at
the time. It is a magnificent production and makes
it clear why scientific visitors continued to visit the
Museum Kircherianum. The plates comprise figures of
Greek, Roman, and Egyptian antiquities, fossils, shells,
animals, plants, waterworks, etc. Also illustrated is a
Magic Lantern, the invention of which is attributed to
Kircher.

REFERENCES: Bedini, S.A., "Cittadels of learning. The
Museo Kircheriano and other seventeenth century Italian
science collections" (pp. 249-67), in: Casciato, M., M.G.
Ianniello, and M. Vitale, M., eds., *Enciclopedia in Roma
Barocca. Athanasius Kircher e il Museo del Collegio Romano
tra Wunderkammer e museo scientifico*. Venezia, Marsilio
Editori, 1986. [1]-376 p., illus., biblio. • BL: [459.c.7]. •
Cobres, *Deliciae Cobresianae*, 1782: 1, 106. • LKG: XVII 16.
• Nissen (ZBI): no. 2198. • NUC: 502, 627 [NR 0401923].
• Pietro & Bonelli, *Biblioteca Mediceo-Lorenese*, 1970: no. 636
[detailed collation].

1002. 2nd edition, 1773-82: [In red:] Rervm Natvralivm |
[in black:] Historia | Nempe | [in red:] Qvadrupedvm
Insectorvm Piscivm Variorvmqve Marinorvm | Corporvm
Fossilivm Plantarvm Exoticarvm | [in black:] Ac
Praesertim | [in red:] Testaceorvm | [in black:]
Exsistentivm | [in red:] In Myseo Kircheraino | [in black:]
Edita Iam | [in red:] A. P. Philippo Bonannio | [in black:]
Nunc Vero Nova Methodo Distribvta Notis Ilvstrata |
In Tavlis Reformata Novisque Observationibvs Locvpletata
| [in red:] A Iohanne Antonio Battarra Ariminensi | [in
black:] Philosophiae Professore | [in red:] Pars Prima. |
[Vingette, showing two people examining specimens] | [in
red:] Romae MDCCCLXXIII. | [in black:] In Typographio
Zempelliano | Aere Venantii Monaldini Bibliopolae. |
[ornate rule] | [in red:] Praesidvm Facvltate.

[TITLE PAGE OF VOLUME 2 READS:]

[In red:] Rervm Natvralivm | ... | [in red:] Pars Secvnda.
[... | [in red:] MDCCCLXXXII. | ...

2 vols. [VOL 1: 1773] 2^o: π^2 b² c⁴ d⁸ e⁴ A-Z⁴ Aa-Hh⁴ Ii⁶; 150 ℓ .; [I]-XL, 1-259, [1] p., frontispiece, 51 plates (numbered Tab. I-XLVII, Tab I App-IV App). [VOL 2: 1782] 2^o: π^4 b-c⁴ d² A-Z⁴ Aa-Vv⁴ Xx²; 188 ℓ .; [I]-XXVII, [1], 1-347, [1] p., 55 plates (numbered Tab I-VII, Tab I-XLVIII). PAGE SIZE: 420 x 270 mm.

CONTENTS: [Vol 1] [I-II], Half title page, "Rervm Natvralivm | Historia," verso blank.; [III-IV], Title page (vingette signed "Antonio Nesi invento, Francesco Nesi incise"), verso blank.; [V]-X, Dedication to Archduke Petro Leopoldo.; XI-XXVIII, "Ioh. Antonii Battarrae | Praefatio."; XXIX, "Adprobationes."; XXX, "Imprimatur, | ..."; XXXI-XXXIV, "Ratio Et Partitio Operis."; XXXV-XXXVI, "Johannis Ant. Battarrae | Commentatiolum De Vita Et Scriptis | Athanasii Kircherii." [with a catalog of Kircher's writings at the end]; XXXVII-XXXVIII, "Ejusdem | Commentariolum De Vita Et Scriptis | Philippi Bonannii [I]."; XXXIX-XL, Table of contents, volume 1.; 1-228, Text.; [229], "Appendix."; [230], Blank.; 231-232, "Epistola | V.C. Iohannis Mariae E Turre | Regis Utrius Que Siciliae Et Neapolis Mvsei Farnesiani Praefecti &c. &c. | Ad Iohannem Antonium Battarram" [dated 12 December 1767]; 233-244, "Epistola | Ioh. Antonium Battarrae | Ariminensis | Ad Ioh. Christoph. Admadvtivm | Lingvae Graecae Professorem | In Archigymnasio Romae Sapientiae."; 245-253, "V.C. Hyacinthi Volii Bononiensis | Medicinae Professoris | De Quadam Gypsi Specie | Dissertatio | ..."; 254-258, "Index | Rerum Notabilium."; 259, "Index Alter | ..."; [=list of where plates are described in the text]; [1 pg], "Errata Corrigenda."

[Vol 2] Pp. [I-II], Half title page, "Rervm Natvralivm | Historia," verso blank.; [III-IV], Title page (vingette signed "Antonio Nesi invento, Francesco Nesi incise"), verso blank.; V, Engraved dedication leave to Ferdinando (AzU copy signed in manuscript, "Jos. Antonius Monaldinus | Bibliopola Romanus").; [VI], Blank.; VII-XVIII, "In Mvsei Kircheriani | Testacea | A Ioh. Antonio Battarra | Phil. Prof. Illvstrata. | Praefatio."; XIX-XXII, "Venantii Monaldinii | In Appendicem | Musei Kircheriani | Praefatio."; XXIII, "Adprobatio."; XXIV, "Imprimatur, | ..."; XXV-XXVII, Table of contents.; [1 pg], Blank.; 1-120, Text [description of shells]; [121], "Appendix."; [122], Blank.; 123-209, "Paschalis Amatii | Sabinanensis | De Restitutione Purpurarum | Liber."; 210-211, "Index Capitum."; 212, "Additamentum."; 213-217, "Iani Planei | Ariminensis | De Mola Pisce | Ad Iosephum Montium | Bononiensem."; 218-221, "Iani Planei | Ariminensis | De Mola Pisce | Epistola Altera | Ad Iosephum Montium | Bononiensem."; [Other essays appear on pages:] 222-225, 226-230, 231-234, 235-236 & 237-242.; [Plates: Tabs I-IV, showing sea creatures and birds]; 243-245, "Iohannes A Battarra | Tritonio Suo."; 246-282, "Catalogus | Omnium Animalium Testaceorum | ..."; 283, "Lectori Benevolo."; [284], Blank.; 285-287, Text of Lectori.; 288, "Auctor Ad Lectorem | Ostracoptam."; 289-314, "Fabii Columanae | Lyncei | De Purpura, Alisque Testaceis | Rarioribus."; [Plates Tab. I-VI, Tab. Unica, showing shells and sharks teeth]; 315-323, "Fabii Columanae | Lyncei | De Glossopetris | Dissertatio."; 324-342, "Ad Clarissimos Socios | Georgicos Trienses | Rerum Naturalivm Montis Marii | Descriptio | ..."; 343-346, "Index."; 347, Errata.; [1 pg], Blank.; [At end], 48 plates, numbered Tab. I-XLVIII, showing mostly shells and bivalves.

PLATES: The plates are unsigned, and in the AzU copy they are, perhaps uniquely, all hand-colored. [Vol 1] I-II, Children. III-VI, Animals. VII-XII, Reptiles, snakes, lizards, spiders and bugs. XIII, Bird beaks. XIV-XVIII, Insects and dragon flies. XIX-XXII, Feathers, spikes and stingers. XXIII-XXVI, Flies. XXVII, Plants (?). XXVIII,

Insects. XXIX-XXXI, Plants. XXXII-XXIV, Microscopic views (?). XXXV-XXXVI, Stones and fossils. XXXVII-XL, Fish and sea creatures. XLI-XLIV, Sponges and corals. XLV-XLVI, Seeds and pods. XLVII, Bird heads and nests. Tab I App.-Tab IV App., Apparatus.

[Vol 2] I-XLVIII, Shells and bivalves.

VERY SCARCE. Revised and edited by Giuseppe-Antonio Battarra [see note below]. Kircher, the great German Jesuit scholar, had formed during his life a magnificent collection of antiquities and natural history specimens. When he died in 1680, the collection was bequeathed to the Collegio Romano. Although Buonanni published a one volume account of the collection in 1709, this much enlarged work is the definitive edition. The volumes cover mainly zoology, paleontology, and conchology, and are superbly illustrated. It is one of the most important accounts of a seventeenth century scientific cabinet.

Volume 1 divides the text into classes of (1) quadrupeds, (2) reptiles and insects, (3) fossils, minerals and stones, (4) fish and sea creatures, and (5) apparatus. Pages 94-152 describe the mineralogical specimens, including gold, silver, copper, iron, lead, tin, mercury, antimony, magnets, marcasite, salt, sulfur, amber, dendrites, fossils, the Philosopher's stone, etc. Some of these are illustrated on plates XXXV-XXXVI. Volume 2 deals almost exclusively with shell and bivalve descriptions.

Giuseppe-Antonio Battarra. (BORN: Coriano, Italy, 1714; DIED: Rimini, Italy, 1789) *Italian cleric & botanist.* Born to a lower class, Battarra entered the seminary of Rimini in 1738 to improve his prospects. After instruction from Giovanni Bianchi, in 1741 he was called to teach philosophy at Savignano. In 1748, he was transferred to Rimini, where he remained.

REFERENCES: BL: [505.i.18.]. • LKG: XVII 16. • NUC: 84, 393-6 [NB 0957353]. (Battarra) ABI: I 121, 209-210. • *Catalogue of Portraits of Naturalists*: 158 [1 portrait listed]. • *Dizionario Biografico Italiani*. • Mazzuchelli, *Gli Scrittori d'Italia*, 1753-63. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

BURAT, Amédée. (BORN: Paris, France, 1809; DIED: Paris, France, 26 May 1883) *French geologist & mineralogist.*

In 1830 studied at the École de Mines in Paris. Became Professor of mineralogy, geology and mining at the École Norm. in 1838. Became emeritus in 1881.

REFERENCES: ABF: I 167, 56. • *Bulletin de la Société Française de Minéralogie*: 6, no. 9, 285-7 [by A. de Selle]. • *Jahrbuch der Erfindungen* [from Poggendorff]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 67. • Poggendorff: 3, 215. • Sarjeant, *Geologists*, 1980: 2, 663. • WBI.

1003. 3rd edition, 1855: *Géologie Appliquée* | [short rule] | *Traité | Du Gisement Et De L'Exploitation | Des Minéraux Utiles* | Par | M. Amédée Burat | Ingénieur, Professeur de Géologie et d'Exploitation des Mines | à l'École centrale des arts et manufactures | [ornate rule] | Troisième Édition | divisée en deux parties | *Géologie — Exploitation* | [short rule] | Deuxième Partie | *Exploitation Des Mines* | [short rule] | Paris | Langlois Et LEclercq | 10, Rue Des Mathurins Saint-Jacques | [short rule] | Les droits de traduction et de reproduction sont réservés | 1855.

2 vols. [VOL 1] 8^o: π^3 1-338; 267 ℓ .; [6], [1]-528 p., 29 plates (2 folding; 1 colored), 48 text figures.; [VOL 2] 8^o: π^2 1-338; 266 ℓ .; [4], [1]-527, [1] p., 34 plates (2 folding), 193 text figures. PAGE SIZE: 215 x 132 mm.

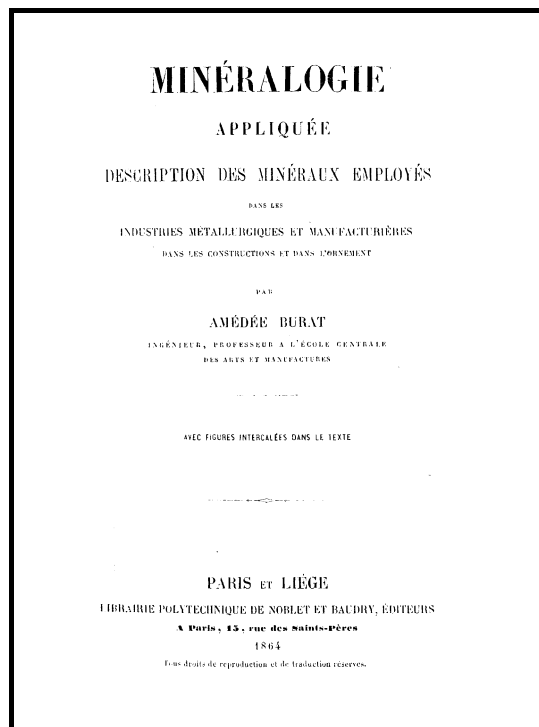
CONTENTS: [Vol 1] [2 pgs], Half title page, "Géologie Appliquée," verso "Du Même Auteur: | ..."; [2 pgs], Title page verso blank.; [1 pg], Dedication to Élie de Beaumont and Dufrenoy.; [1 pg], Blank.; [1]-525, Text.; [526]-528, "Table Des Matières."

[Vol. 2] [2 pgs], Half title page, "Géologie Appliquée," verso "Du Même Auteur: | ..."; [2 pgs], Title page verso

blank.; [1]-524, Text.; [525]-527, "Table Des Matières."; [1 pg], Blank.

VERY SCARCE. Volume 1 is a textbook on applied geology. Volume 2 is a textbook on the exploration of mines. Both volumes make use of elaborate steel engravings to illustrate concepts put forth in the text. These illustrations are exceptionally good. Volume 2 shows for example drill bits, underground scenes, mining techniques, waste rock management, wenchers & hoists, picks, etc.

REFERENCES: NUC.



MINÉRALOGIE APPLIQUÉE, 1864

1004. — French, 1864.

Minéralogie | Appliquée | Description Des Minéraux Employés | Dans Les | Industries Métallurgiques Et Manufacturières | Dans Les Constructions Et Dans L'Ornement | Par | Amédée Burat | Ingénieur, Professeur A L'École Centrale | Des Arts Et Manufactures | [short rule] | Avec Figures Intercalées Dans Le Texte | [ornate rule] | Paris et Liège | Librairie Polytechnique De Noblet Et Baudry, Éditeurs | A Paris, 15, rue des Saints-Pères | 1864 | Tous droits de reproduction et de traduction réservés.

8°: π^3 1-298 306; 241*l.*; [4], [I]-II, [1]-476 p., 224 text figures. PAGE SIZE: 216 x 124 mm.

CONTENTS: [2 pgs], Half title page, "Minéralogie | Appliquée," verso "Corbeil, typ. et stér. de Créte."; [2 pgs], Title page, verso blank.; [I]-II, "Préface."; [1]-470, Text.; [471]-476, "Table Des Matières."

VERY SCARCE. The first portion of the volume comprises a general introduction to mineralogical science, focusing on the applied aspects. This introductory material is divided into 5 chapters that provide overviews on the physical characters, crystallography, applying crystallography in species determination, chemical qualities, nomenclature and classification. The remainder of the book provides a descriptive mineralogy of the most common minerals and those of economic importance. Complementing this section are many fine steel engravings some being of actual mineral specimens. These illustrations belong to the finest black and white depictions of mineral specimens ever produced by none photographic means.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 186.

BURR, Thomas.

1005. — English, 1846 [First edition].

Remarks on the Geology and Mineralogy of South Australia. Adelaide, Andrew Murray, 1846.

12°: 32 p.

CONTENTS: [1-2], Title page, verso blank.; [3]-32, Text.

VERY RARE. This pamphlet outlines all known finds of minerals in South Australia and significantly notes the discovery of native gold ten miles north-east of Adelaide, predating the Australian gold rush. The publication was of such interest that the Government Printer reprinted it about 1890.

REFERENCES: Ferguson, *Bibliography of Australia*, 1941-69: no. 4245.

BURTIN, François Xavier. (BORN: Maestricht, France, 1743; DIED: 7 August 1818) *Belgian physician & naturalist.*

Practical doctor in Brussels. Under King Joseph II, member of the sovereigns privy council. Wrote about the fossils and minerals found around Maastricht in *Oryctographie de Bruxelles*. Bruxelles, 1784.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78. • BAB: 116, 71-102. • *Biografisch Woordenboek België*. • *Biografisch Woordenboek Nederland*. • Lambrecht & Quenstedt, *Catalogus*, 1938: 69. • Poggendorff: 1, col. 350 & 3, 219. • WBI.

1006. — French, 1784.

Oryctographie de Bruxelles, ou Description des Fossiles Tant Naturels qu'accidentels découverts Jusqu'à ce Jour dans les environs de cette Ville par M: François-Xavier Burtin Médecin Cons, de feu S.A.R. le Duc Charles de Lorraine ... Bruxelles, de L'imprimerie de le Maire 1784 avec Approbation et Permission Se vend Chez L'auteur, prix broché 60. de France.

8°: [2], 1-151, [1] p., 32 leaves of plates (hand-colored).

CONTENTS: [Engraved title page].; 1-2, Dedication to Marie-Christine, Princess of Hungary and Bohemia, and Albert, Prince of Poland and Lithuania.; 3-9, "Discours Préliminaire."; 10, "Table des Chapitres."; 11-146, Text.; [32 leaves of plates].; 147-151, Explication of the plates.

BUSHELL

SCARCE. Apparently, the first extensive book treating Belgium fossils and minerals. It is beautifully illustrated, with the thirty-two hand colored copperplates showing fossils and petrifications found in the vicinity of Brussels. Contained in the text are descriptions of various fossils and minerals found in the region.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 502. • Freilich Sale Catalog: no. 111. • Landwehr, *Studies in Dutch Books*, 1976: no. 49. • LKG: XIV 704. • Roller & Goodman, *Catalogue*, 1976: 1, 190. • Ward & Carozzi, *Geology Emerging*, 1984: no. 410.



BUSHELL

BUSHELL, Thomas. (BORN: Cleve Prior, Worcestershire, England, 1594; DIED: April 1674) *English mining expert.*

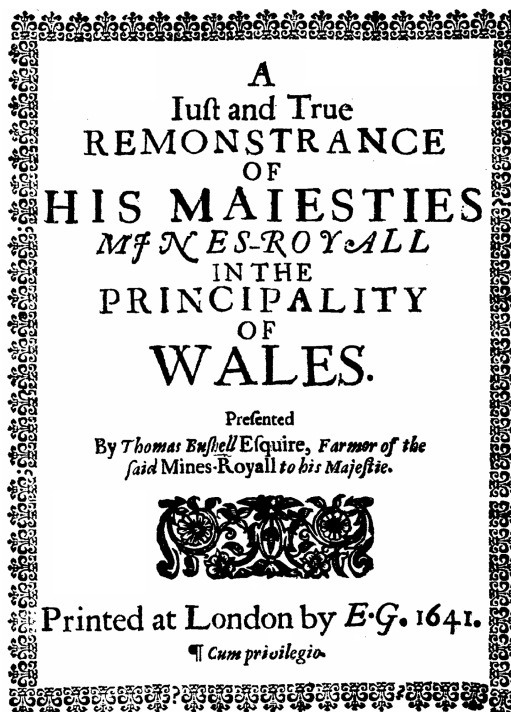
Bushell was educated at Baliol College, Oxford. He was afterwards in the service of Lord Chancellor Bacon, on whose disgrace he retired into Oxfordshire, to reside on his estate. He was strongly attached to the royal cause, and had the honour to entertain Charles I. and his queen at his seat at Road Enstone, near Woodstock, in 1636, when he submitted his celebrated water-works to them with much pageantry, and many speeches and songs took place. Dr. Plot gives a long description of the place. For his services to the king he was made Master of the Royal mines in Wales. In this new appointment he, by permission, established a mint at Aborecky in conjunction with Lord Godolphin, and coined money, which he sent to his sovereign at Oxford. Their mine yielded at one time one hundred pounds worth a week of silver, besides half as much lead.

REFERENCES: Gough, *The Superlative Prodigall*, 1932. • Internet search.

1007. — English, 1641.

[Contained within an ornate box:] A | Iust and True | Remonstrance | Of | His Majesties | Mines-Royall | In The | Principality | Of | Wales. | Presented | By Thomas Bushell Esquire, Farmer of the | said Mines-Royall to his Majestie. | [ornament] | Printed at London by E.G. 1641. | ¶Cum privilegio.

4°: A-D⁴ E³; 18l.; [1]-36 p. PAGE SIZE: 180 x 135 mm. VERY RARE.



REMONSTRANCE, 1641

CONTENTS: [1-2], Title page, verso blank.; [2]-[8], "Most high and might Sovereigne, | ..."; 9, "The declaration of learned Law- | yers what a Mine-Royall | is, according to former | presidents."; 10-12, "To the Kings most excellent | Majestie."; 13-14, "To the Kings most excellent | Maiesty."; 15-16, "To the most illustrious | Prince Charles."; 17-19, "To our dread Sovereigne Lord | The Kings most Excellent | Majestie."; [20], Blank.; 21-24, "A | Certificate from the Miners..."; 25-26, "To The | Right Honovrable | the Lords and others of His | Maiesties most Honourable | Privy Councell."; 27-29, "Die Sabbati | 14. Aug. 1641."; 30, "A letter from the L. Keeper."; 31-34, "A letter to Mr. Bushell..."; 35-36, "An answer to Mr. Broadwaies | Letter."

REFERENCES: Gough, *The Superlative Prodigall*, 1932.

1008. — English, 1649.

The Case of Thomas Bushell, of Enston in the county of Oxon, esquire. Truly stated. Together with his progress in minerals, and the desires of severall merchants and others that are willing and ready to advance so good a work for the benefit of the nation. Humbly tendered to the serious consideration of the honourable House of commons, and all other persons in authority, wheter civill or martiall, that are desirous to advance the trade of the nation, supply the necessities of the poor, by discovering the hidden treasures of the earth, preserve the lives of many porre creatures from untimely death (who now are destroyed in their prime for potty follonios) which might otherwise

be made serviceable to the commonwealth. London: Printed in the year 1649.

Broadsheet. VERY RARE.

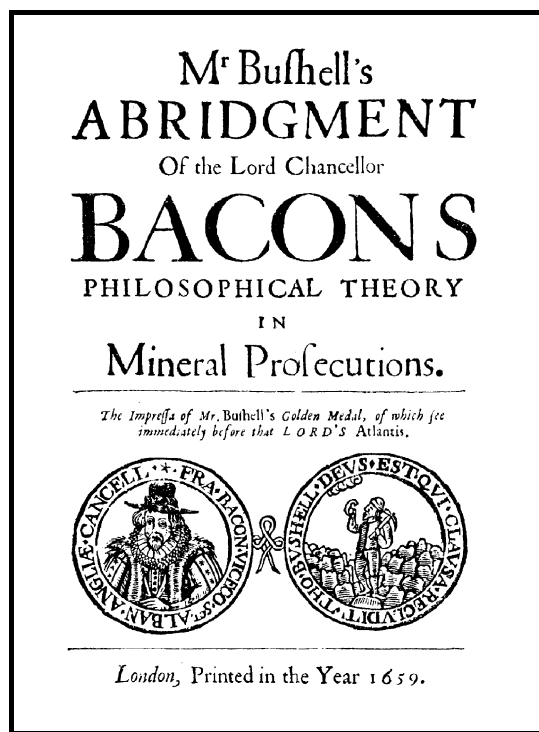
REFERENCES: Gough, *The Superlative Prodigall*, 1932.

1009. — English, 1656.

A table, setting forth the maner of that great philosopher the Lord Chancelor Bacons searching for mettals by making addits through the lowest level of hills or mountains, and conveying aire into the innermost parts of their center by pipe and bellows; as well by art to mollifie the hardest stone, without the tedious way and inestamable charge of sinking aery shafts; and is now intended to be put in practice by his meniall servant Thomas Bushell, on Hingston-Downe, according to his Lordships command, and the approbation of that great mineralist, Sir Francis Godolphine; with the demonstrative reasons of each particular to the lords of the fee, and proprietors of Hingston-Downe, is as followth; [London, 1656?].

Broadsheet. PAGE SIZE: 480 x 355 mm. VERY RARE.

REFERENCES: Gough, *The Superlative Prodigall*, 1932.



MR BUSHELL'S ABRIDGMENT, 1659

1010. — English, 1659.

Mr Bushell's | Abridgement | Of the Lord

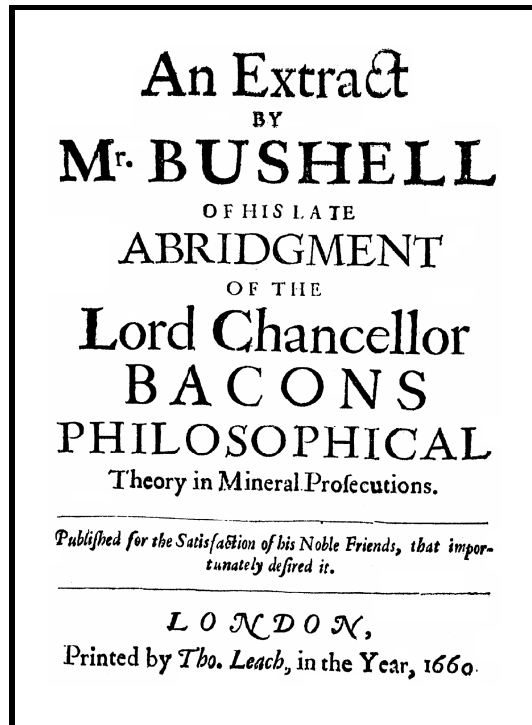
Chancellor | Bacons | Philosophical Theory | In | Mineral Prosecutions. | [rule] | The Impressa of Mr. Bushell's Golden Medal, of which see | immediately before that Lord's Atlantis. | [ornament] | [rule] | London, Printed in the Year 1659.

4^o: A⁴ A² A² B⁴ (last blank) A⁴ A² B² A² B² A⁴ B² B² B⁴ A-E⁴ F² A-C⁴ D² (not always in this order); ??ℓ.; [16], 1-14, 1-8, 1-4, 1-12, 1-4, 1-8, 1-12, 9-16, 1-40 (i.e., 44), 1-27 p., illus.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "To the Reader."; [4 pgs], Dedication.; [3 pgs], "Contents."; [1 pg], Blank.; 1-14, "Mr. Bushell's Letter."; 1-8, "Mr. Bushell's Mineral Overtures."; 1-4, "A Table setting forth the manner of that great Philosopher the Lord Chancellor Bacons Searching for Mettals."; 1-12, "To his Highness the Lord Protector."; 1-4, "Finding of the mineral grand jury at Chewton."; 1-8, "Mr. Bushells Petition to the late King."; 1-12, "Mr. Bushell's Invitation by Letter to Condemned men for Petty-felonies, to work in the Mines..."; 9-14, "The late King's Letter of Invitation to Mr. Bushell, ..."; [15]-16, "The Impressa of Mr. Bushell's golden Medall." [1-2], Title page, "New | Atlantis. | A Work unfinished. | [rule] | Written by the Right Honorable, Francis, | Lord Verulam, Viscount St. Alban. | [rule] | [ornament] | London, | Printed by Tho: Newcomb, 1659."; [3], "To the Reader."; 4-8, 5-40 (i.e., 44), Text. 1-27, "Post-Script."

VERY RARE. Contains also the "New Atlantis" written by Francis Bacon, with a separate title page dated 1659.

REFERENCES: Gibson, *Francis Bacon, a Bibliography of his Works*, 1950: no. 214. • Gough, *The Superlative Prodigall*, 1932. • Wing: B304.



AN EXCERPT, 1660

BUTTGENBACH

1011. — English, 1660.

An Excerpt | By | Mr. Bushell | Of His Late |
Abridgement | Of The | Lord Chancellor | Bacons
| Philosophical | Theory in Mineral Presecutions.
| [rule] | Published for the Satisfaction of his Noble
Friends, that impor- | unately desired it. | [rule]
| London, | Printed by Tho. Leach, in the Year,
1660.

8°: [4], 54 (i.e., 52), [14], 9-40, [1] p., illus.

CONTENTS: [2 pgs/=A1], Title page, verso portrait.; [2 pgs/=A2], "Dread Sovereign."; [1]-6/=A3r-B1v, "My Lord and Gentle-man."; 7-9/=B2r-B3r, "Mr Bvshel's | Letter | To the Right Honourable the | Lord Fairfax | Touching his | Articles of VVar."—dated 18 April 1659.; 9-10/B3r-B3v, Other letters.; 11-14/=B4r-C1v, "To the Right Honourable | William Lenthal | Speaker to the | Parliament."; 14-22/=C1v-D1v, "Mr Bushel's Mineral Overtures."—dated 4 July 1641, illustrated on page 22 with "A table..."; 23-54 (i.e., 52)/=D2r-G4v, Text of more letters.; [7 pgs], "The Case of the Mine Royal judged to be the most | learned Lawyers under their hands."; [1 pg], Blank.; [2 pgs], "Die Sabbati 14. Aug. 1641."; [4 pgs/=†1r-†2v], "The Miners Contemplative Prayer..."; 9-16/=*1r-*4v, "An Abridgement of my Lord Bacon's | Atlantis."; [1 pg], "The Impressa of Mr. Golden Medal." with an illustration of the medal and at the bottom of the page "Finis."; [1 pg], Blank.; 17-36/=G3r-I4v, "Post-script to the Judious Reader."; 37-38/=X1r-X1v, "A Sonnet..."; 39-40/=K2r-K2v, "A Sonnet Sung...", ending "Finis."

VERY RARE. This very curious book contains a portrait and impression of Mr. Bushell's "Golden Medal." In the *Bookworm* (1869), is a very interesting notice of these tracts, which leaves no doubt in the mind of the writer of the article that Bushell "was the canal through which ran the fortunes of Lord Bacon to be sunk in unprofitable mining schemes." The article is illustrated by an engraving of the Golden Medal.

REFERENCES: UNKNOWN, "?????", *The Book-worm: an illustrated literary and bibliographical review*, 4 (1869), ??-??. [Something about Thomas Bushell's tracts is contained in an article.]. • Gough, *The Superlative Prodigall*, 1932. • LKG: XII 5.

BUTE, Earl of.

See: Stuart, John.

BUTTGENBACH, Henri Jean François. (BORN: 1874; DIED: 1964) *Belgian economic geologist & mineralogist.*

As a young man, Buttgenbach entered the mining industry, working in Mexico, Florida, Argentina, Tunisia, Morocco, South Africa and principally Katanga, Zaïre. He became a professor of geology at the University of Liège from 1921 to 1945. He wrote many papers on the mineralogy of Belgium and Zaïre.

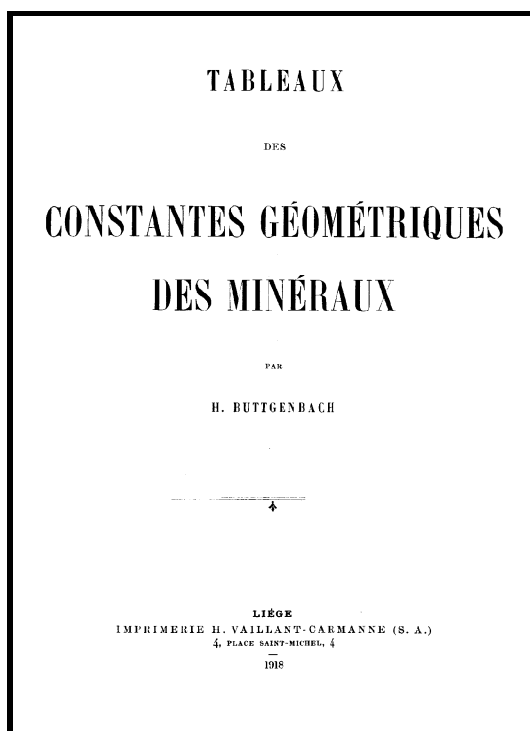
REFERENCES: *American Mineralogist*: 53 (1968), nos. 3-4, 536-44, portrait [by J. Mélon]. • *Annales de la Société Géologique de Belge*: 88 (1965), Bulletin no. 1, pp. B17-B18, portrait [by J. Mélon]. • BAB: 118, 47-51. • Buttgenbach, H., "Kantanga, 1902-Katanga, 1947," *Annals de Société Géologie Begium*, 70 (1947), Bulletin, pp. B359-B74. [Reminences of mining in Kantanga by Buttgenbach.]. • Sarjeant, *Geologists*, 1980: 2, 674. • WBI.

1012. — French, 1918.

Tableaux | Des | Constantes Géométriques | Des
Minéraux | Par | H. Buttgenbach | [ornate rule] |



BUTTGENBACH



TABLEAUX, 1918

Liège | Imprimerie H. Vaillant-Carmanne (S.A.) |
4, Place Saint-Michel, 4 | [rule] | 1918.

4°: [1]-86, [2] p. PAGE SIZE: 272 x 212 mm.

CONTENTS: [1-2], Half title page, "Tableaux | Des | Constantes Géométriques Des Minéraux," verso blank.; [3-4], Title page, verso blank.; [5]-86, Text.; [84], Blank.; [85]-86, Index.; [1 pg], Errata.; [1 pg], Blank.

SCARCE. List of the geometric angles for about 250 mineral species across all crystal systems.

REFERENCES: Dana's 7th (Bibliography): 69. • NUC.

BÜTTNER, David Sigismund August. (BORN: Chemnitz, Hungary, 28 November 1724; DIED: Göttingen, Germany, 20 November 1768) *Hungarian biologist.*

Hungarian botanist. Büttner was appointed professor of medicine and botany in 1756 at the Collegium medico-chirurgicum Berlin. From 1760 to 1768, he was professor of botany and zoology at the University of Göttingen.

REFERENCES: Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, 2400. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16: 1, 718-9. • Poggendorff: 1, col. 337. • Wagenitz, *Göttinger Biologen*, 1988: 39.

1013. — Latin, 1694 [Dissertation].

Seu Disputatio De Lapidibus tam Pretiosis quam Vulgaribus, vulgo, von edeln und gemeinen Steinen. Præs. D. Büttnero. Hamburg, 1694.

4°:

VERY SCARCE. OLDIUS. Jacobus

REFERENCES: BL: [444.c.33.]. • LKG: XVI 92.

1014. — German, 1710.

Rudera Diluvii Testes, i.e. Zeichen und Zeugen der Sündfluth, in Ansehung der itzigen Zustandes unserer Erd- und Wasser-Kugel, insonderheit der darinnen vielfältig auch zeither im Querfurtischen Revier unterschiedlich angetroffenen, ehemals verschwemten Thiere und Gewächse, bey dem Lichte natürlicher Weissheit betrachtet und nebst vielen Abbildungen zum Druck gegeben. Leipzig: Johann Friedrich Braun, 1710.

4°: [8], 314, [20], [2] p., engraved frontispiece, XXX leaves of plates (some folded). Includes index. Title page printed in red and black. PAGE SIZE: 194 x 150 mm.

VERY SCARCE. An early work on geology and fossils by a Lutheran pastor near Leipzig. The plates show fossils, minerals, and two sections of the earth after Kircher. The text concerns the fossil evidence of the biblical Deluge.

First edition, rare, of this study of the fossils of Querfurt in Saxony, considered as 'relics of the universal deluge'. Büttner (1660-1719) deacon of Querfurt, was a theologian and naturalist, and wrote this work in order to demonstrate that fossils were the remnants of the Flood. 'Büttner ... was firmly convinced of the diluvial origin of fossils, and was strongly opposed to those who attributed these "reliquiae diluvianae" to either the "lusus naturae" or the spermatoc principle. Büttner, in his Treatise on the Deposits which are Evidence of the Deluge, refers in surprisingly scurrilous terms to Lhwj and his animalculae' (Melvin E. Jahn and Daniel J. Woolf in *The Lying Stones of ... Beringer*, p. 178).

REFERENCES: LKG: XVII 17. • Roller & Goodman, *Catalogue*, 1976: 1, 183.

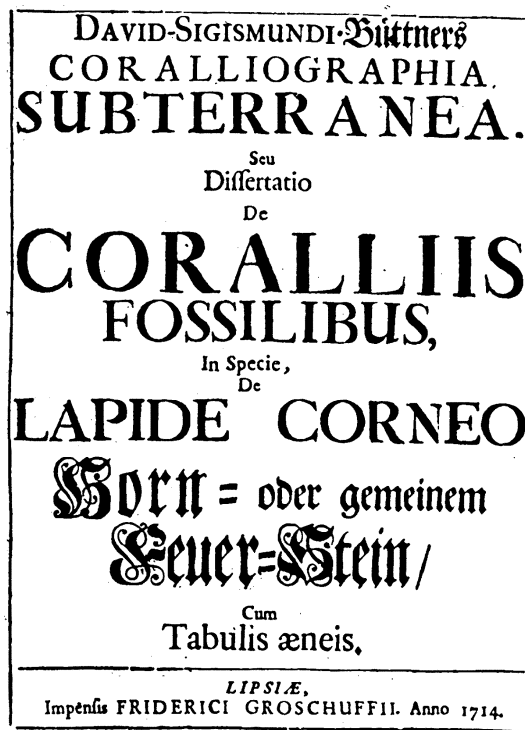
1015. — German, 1712?.

Als Christian Herzog zu Sachsen Ann. 1712 in Dero Hauptstadt Ouerfurt die Erbhuldigung eingenommen hatte, wurde eine bei Dero Quer-

furt. Amtsdorfe Kuchburg gewaltige und mit unterschiedlichen Nautalis, Conchitis und andern Petrifactis angefüllte marmelartige Platte unterthanigst überreicht, auch deren Beschaffenheit in nachgesetztem Carmine unter der Rubrik: die huldigende Kuckenburg, umständlicher vorgestellt. Zum andernmal zum Druck gefordert von D.S. Büttner. Querfurt, [n.d.].

8°: VERY SCARCE.

REFERENCES: LKG: XIV 226*.



CORALLIOGRAPHIA SUBTERRA NEA, 1714

1016. — Latin, 1714 [Dissertation].

[Contained within a single rule box: David-Sigismundi Büttners | Coralliographia | Subterranea | Seu | Dissertatio | De | Coralliis | Fossilibus, | in Specie, | De | Lapide Corneo | Horn= oder gemeinem | Feuer=Stein/ | Cum | Tabulis æneis. | rule | Lipsiæ, | Impensis Friderici Groschuffii. Anno 1714.

4°: [4], 68, [4] p., VI (i.e., IV) leaves of plates. Includes index. The text of each page is contained within a single rule box. PAGE SIZE: 190 x 135 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Elenchus." [=table of contents]; 1-68, Text.; [4 pgs], Index.

VERY SCARCE. Büttner's dissertation on fossil coral includes some material on the formation of stones.

REFERENCES: Hoover Collection: no. 191. • LKG: XVII 127. • Roller & Goodman, *Catalogue*, 1976: 1, 183. • Ward & Carozzi, *Geology Emerging*, 1984: no. 379.

BYTEMEISTER

BYTEMEISTER, Heinrich Johann. (BORN: Zelle, Niedersachsen, Germany, 5 May 1698; DIED: Helmstädt, Germany, 22 April 1746) *German Lutheran theologian & bibliographer.*

Bytemeister began attending the Academy at Wittenberg in 1716. In 1725, he became professor of theology at the University of Helmstädt. Throughout his lifetime, he accumulated a large and varied collection of artificial and natural objects, which included minerals.

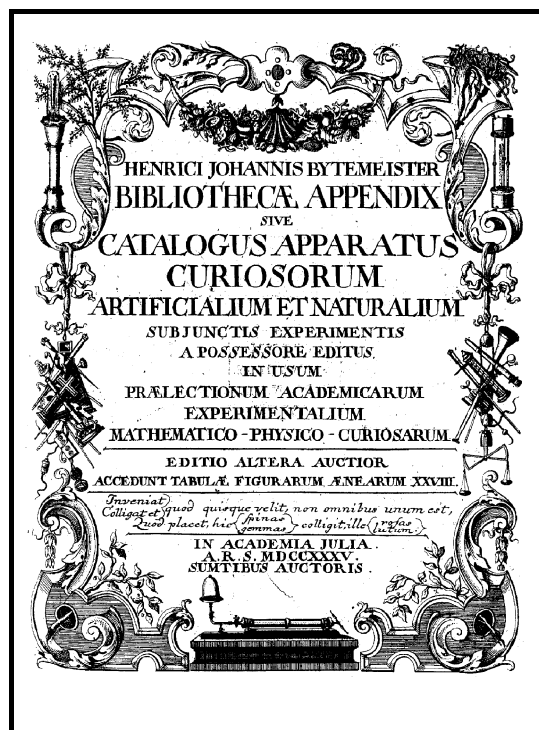
REFERENCES: DBA: I 172, 308-315. • Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, cols. 527-8. • Lambrecht & Quenstedt, *Catalogus*, 1938: 70. • WBI. • Wilson, *History of Mineral Collecting*, 1994.

1017. — Latin, 1731 [First edition].

Appendix Bibliothecae Henr[ici]. Jo[annes]. Byte-meister, sive Catalogus Apparatus Curiosorum Artificialium et Naturalium Subjunctis Experimentis a Possessore ed. in usum Praelectionum Academicarum Experimentalium ... [Helmstadii:] 1731.

8°: 46 p. VERY RARE.

REFERENCES: BL: [no copy listed]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 261. • GV (1700-1910): 22, 414-5. • Murray, *Museums*, 1904: 1, 148 & 2, 151. • NUC: [no copy listed].



BIBLIOTHECAE APPENDIX, 1735.

1018. 2nd edition, 1735: [Engraved title, with an ornate border containing motifs of flowers, shells, and instruments surrounding the text:] Henrici Johannis Bytemeister | Bibliothecae Appendix | Sive | Catalogus Apparatus | Curiosorum | Artificialium Et Naturalium | Subjunctis Experimentis | A Possessore Editus | In Usu | Praelectionum Academicarum | Experimentalium |

Mathematico - Physico - Curiosarm | [rule] | Editio Altera Auction | Accedunt Tabulae Figurarum Aenearum XXVIII. | [rule] | [The next two lines braced on their right side by a "}":] Inveniat | Colligat et | quod quisque velit, non omnibus unum est, | Quod placet; hic [The next two words are written on above another and braced on both sides:] { spinas [above:] gemmas } colligitille [The next two words are written on above another and braced on both sides:] { rofas [above:] lutum. } | [rule] | In Academia Julia | A.R.S. MDCCXXXV. | Sumtibus Auctoris.

4°:) (4 A-G⁴ H¹; 33ℓ.; [8], [1]-58 p., frontispiece (portrait of Bytemeister), 28 engraved plates (numbered Tab I-XXVIII; plate XVII folding). The pagination and collation formulas are complicated by the first leaf which although blank has a portrait of Bytemeister pasted on the verso that acts like a frontispiece. PAGE SIZE: 300 x 190 mm.

CONTENTS: [1 pg], Blank.; [1 pg], Blank with a portrait of Bytemeister pasted down that acts like a frontispiece.; [2 pgs], Title page, verso blank.; [4 pgs], Dedication, dated MDCCXXV [=1735].; [1]-34, "H.J. Bytemeister | Apparatus | Curiosorum | Pars I. | Curiosa Artificialia Mathematico. | Physica."; 35-56, "Pars II. | Curiosa Naturalia, | quae commonstrantur, | Subjunctis Passim Experimentis, Et Discursu."; 56-58, Text in German describing various ores.

PLATES: The work contains an engraved frontispiece portrait of Bytemeister and 28 other engraved plates. The frontispiece is actually a smaller picture that has been pasted down to the verso of the leaf facing the title page, and therefore does not constitute a true plate. However, it is a finely executed picture of Bytemeister within a rectangular frame, showing his head and torso. It contains the text immediately under the portrait, "Henric, Johanes Bytemeister | Libb. Artt. Met. Philos. D. Academic | Julice Assessor. | Sym. Ex verbo fides, ex fide salus. | ad Rom. C. X. 17. et C. III. 28." The picture is signed at the bottom, "Joh. Georg Schmidt sculpsit Brunsvig. 1734." Plates I-VIII show renderings of artificial items such as mechanical apparatus, instruments, scales, looms, and other man-made curiosities, while plates IX-XXVIII illustrate items thought to be natural. These include archological artifacts, corals, dendritic patterns, and fossil shells and fish. Each individual illustration is numbered so that its picture may be matched with the description in the text. The plates are numbered Tab I to Tab XXVIII, with Tab XVII folding. All of the plates at the end are signed in a fashion similar to Ant. Aug. Beck delin, Io. Georg Schmidt sculps. Brunvici. Tab I is dated 1734.

RARE. Apparently, Bytemeister had a large and extensive collection of both artificial and natural objects. This edition of the collection catalog has been enlarged and augmented with further descriptions and 28 fine plates. It is divided into two parts. The first covers the artificial or man-made objects, including instruments, tools and old coins. This portion is further separated into sections on arithmetic, geometry, optics, astronomy, economics, mechanics, hydraulics, physics, money and other curious artificial devices. The second part of the work describes the natural objects, including fossilized remains of animals and plants, minerals, stones, and crystals. At its conclusion a short text in German describes various ore specimens. Enhancing the text is a fine portrait of Bytemeister that is utilized as a frontispiece, and 28 engraved plates illustrating many of the more interesting items from the collection. Plates 1 to 8 picture the artificial items, while the remainder show the natural objects.

REFERENCES: BL: [458.b.25.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 261 ["Enthält vortressliche Abbildungen von allerley Versteinerungen, Bildsteine, etc."]. • GV (1700-1910): 22, 414-5. • Murray, *Museums*, 1904: 1, 148 & 2, 151. • NUC: 88, 298 [NB 1025358]. • Schröter's *Journal für die Liebhaber*: 4 (17??), 40-2.

CÆSALPINO, Andrea.

See: Cesalpino, Andrea.

CÆSIUS, Bernardo.

See: Cesi, Bernardo (federico).

CALCEOLARIUS, Franciscus.

See: Calzolari, Franciscus.

CALDERÓN Y ARANA, Salvador. (BORN: Madrid, Spain, 22 September 1851; DIED: Madrid, Spain, 3 July 1911) *Spanish geologist, petrologist & mineralogist.*

Calderón was professor in Las Palmas, but he was deported for political reasons. He went back to Madrid, where he founded the Institución Libre de Enseñanza. After some time spent studying in Geneva, Vienna and Munich, he went to Nicaragua, and in that country, founded in León, with others, the Instituto de Occidente. In 1883, Calderón was commissioned by the Spanish government to visit the most important natural history museums in Europe, to obtain the criteria by which the reform of the Spanish museums should be made. He was a teacher of geology in the University of Sevilla and, later, in the University of Madrid. Calderón was an expert on the geology of the Guadalajara region of Spain and the Canary Islands.

REFERENCES: ABE: I 153, 207-212; III 115, 150-163. • Hernández Pacheco, E., "El profesor D. Salvador Calderón y Arana y su labor científica," *Boletín de la Real Sociedad Española de Historia Natural*, 11, 405-45. • Lambrecht & Quenstedt, *Catalogus*, 1938: 71. • López Piñero, *Diccionario Histórico*, 1983: 1, 158-9. • Ordóñez, S., "La escuela de geología de Madrid. Salvador Calderón y Arana (1853-1911)" (pp. 1, 570-1), in: *III Congreso Español de Geología y VII Congreso Latinoamericano de Geología*. Simposios. Salamanca, 1992. • Sarjeant, *Geologists*, 1980: 2, 679 & Suppl. 2 (1995), 1, 486. • WBI.

Die Mineralfundstätten der Iberischen Halbinsel (Berlin, 1902).

See: Tenne, Conrad Friedrich August.

1019. — Spanish, 191—.

Mineralogia Manuales. Barcelona, Manuel Soler, 191—.

8°: 224 p., illus. Published as: *Col. Manuales Gallach N° VII*. PAGE SIZE: 150 x 100 mm. RARE.

REFERENCES: BL: [no copy listed].

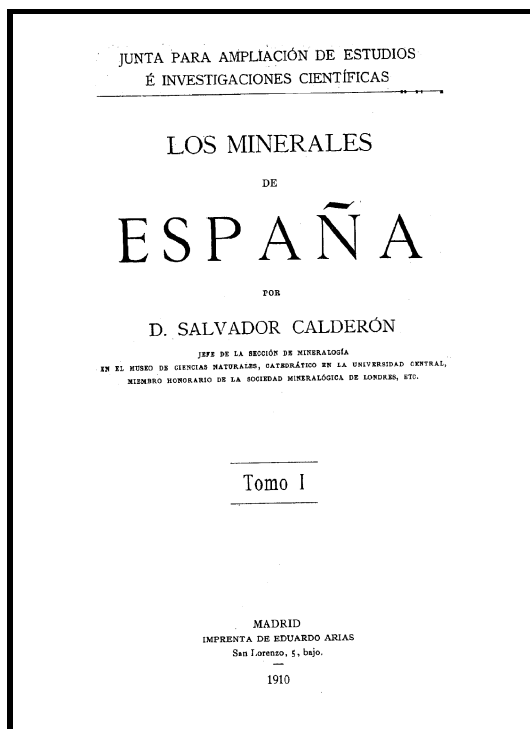
1020. — Spanish, 1910.

Junta Para Ampliación De Estudios | É Investigaciones Científicas | [rule] | Los Minerales | De | España | Por | D. Salvador Calderón | [...3 lines of titles and memberships...] | Tomo I | [rule] | Madrid | Imprenta De Eduardo Arias | San Lorenzo, 5, bajo. | [short rule] | 1910.

2 vols. in one. [VOL 1] 8°: [I]-VIII, [1]-416 p. [VOL 2] 8°: [1]-561, [1] p. PAGE SIZE: 228 x 162 mm.

CONTENTS: [Vol 1] [I-II], Half title page, "Los Minerales De España," verso blank.; [III-IV], Title page, verso blank.; VII-VIII, Preface.; [1]-24, "Introducción."; [25]-32, "Principales Trabajos" [=bibliography]; [33]-414, Text.; [415]-416, "Índice Del Tomo I."

[Vol 2] [1-2], Half title page, "Los Minerales De España," verso blank.; [3-4], Title page, verso blank.; [5]-532, Text.; [533]-546, "Índice Del Tomo II."; [547]-561, "Índice | por provincias de las especies minerales citadas en esta obra."; [1 pg], Blank.



LOS MINERALES DE ESPAÑA, 1910

SCARCE. Calderón's two volume classic work, *Los Minerales de España*, is the fundamental work on Spanish mineralogy, and even today it is an essential source of information. It was the first serious modern attempt at a compilation of Spanish mineralogy, and follows Groth's classification, describing the minerals found in the Peninsula, province to province, together with information about the deposits then known or supposed.

Calderón compiled the information from his own studies about Spanish minerals, adding historical notes, new species and new deposits, because in those years, the works of the Spanish institutions related to mining and mineralogy (Escuela de Minas de Madrid, Real Sociedad Española de Historia Natural) encouraged the knowledge of the mineralogy of the country. Calderón's work influenced most of the modern works that describe the mineralogy of Spain.

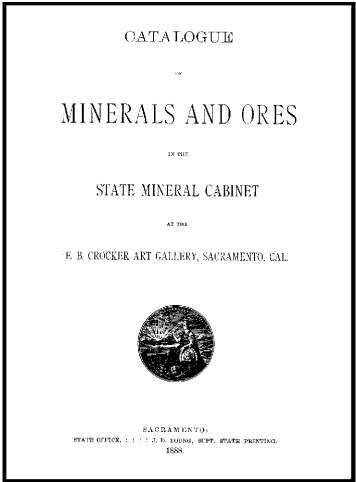
REFERENCES: BL: [Ac.145/2.]. • Dana's 7th (Bibliography): 69. • NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 1110.

CALIFORNIA. State Mineral Cabinet.

1021. — English, 1888 [Collection catalog].

Catalogue | Of | Minerals And Ores | In The | State Mineral Cabinet | At The | E.B. Crocker Art Gallery, Sacramento, Cal. | [ornament] | Sacramento: | State Office, : : : J.D. Young, Supt. State Printing. | 1888.

8°: [1]-93 p. PAGE SIZE: 228 x 148 mm.



CATALOGUE, 1888

CONTENTS: [1-2], Title page, verso blank.; [3], "Preface."—dated May 1888.; [4], "Chapter LX.;" [5]-93, Text.

VERY RARE. Compiled by W.F. Jackson. This is an 1888 catalog of the ores and mineral specimens recovered in California and proudly shown off in the State Mineral Cabinet located at the E.B. Crocker Art Gallery in the state capital of Sacramento. The list of a few thousand ores includes specimens containing platinum, gold, silver, mercury, copper, etc., with essentially no information other than the collection number and the locality. A hand written note on the front end page of the copy examined states "that the mineral collection has been moved to the Sacramento Junior College to be recatalogued and placed in the museum in the library building, which is being constructed." Signed by Bob Lanning and dated February 21, 1936.

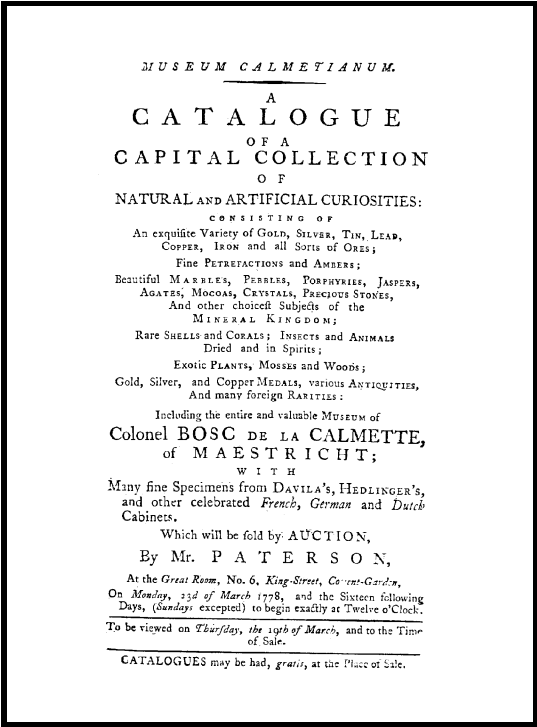
REFERENCES: NUC.

CALMETTE, Bosc de la, Colonel. (BORN: Maestricht, The Netherlands, ; DIED:) *Dutch military officer.*

Owned a cabinet of fossils and minerals. No other information found.

REFERENCES: Engel, *Dutch Zoological Cabinets*, 1986: no. 272.

1022. — English, 1778 [Sale catalog].
Museum Calmetianum. | [tapered rule] | A |
Catalogue | Of A | Capital Collection | Of
| Natural and Artifical Curiosities: | Consisting
Of | An exquisite Veriety of Gold, Silver, Tin,
Lead, | Copper, Iron and all Sorts of Ores; | Fin
Petrefactions and Ambers; | Beautiful Marbles,
Pebbles, Porphyries, Jaspers, | Agates, Mocoas,
Crystals, Precious Stones, | And other choicest
Subjects of the | Mineral Kingdom; | Rare Shells
and Corals; Insects and Animals | Dried and in
Spirits; | Exotic Plants, Mosses and Woods; | Gold,



MUSEUM CALMETIANUM, 1778

Silver, and Copper Medals, various Antiquities, |
And many foreign Rarities: | Including the entire
and valuable Museum of | Colonel Bosc de la
Calmette, | of Maestricht; | With | Many fine
Specimens form Davila'a Hedlinger's | and other
celebrated French, German and Dutch | Cabinets.
| Which will be sold by Auction, | By Mr. Paterson,
| At the Great Room, No. 6, King-Street, Covent-
Garden, | On Monday, 23rd of March 1778, and
the Sixteen following | Days (Sundays excepted)
to begin exactly at Twelve o'Clock. | [rule]| To be
viewed on Thursday, the 10th of March, and the
the Time | of Sale. | [rule]| Catalogues may be
had, gratis, at the Place of Sale.

8°: 99 p.

RARE. Auctions sale catalog of Colonel Bosc de la Calmette natural history collections, which contained a large amount of material related to mineralogy and crystallography.

REFERENCES: Wilson, *History of Mineral Collecting*, 1994: 206.

CALONNE, Charles Alexandre de. (BORN: Douai, France, 1734; DIED: Paris, France?, 30 October 1802) *French statesman & controller general of finances.*

Faced with a huge public debt and a steadily deteriorating financial situation, Calonne adopted a spending policy to inspire confidence in the nations financial position. He then proposed a direct land tax and the calling of provincial assemblies to apportion it, a stamp



CALONNE

tax, and the reduction of some privileges of the nobles and clergy. To gain support, Calonne had King Louis XVI call an Assembly of Notables, but the Assembly (1787) refused to consider Calonne's proposals and criticized him bitterly. Dismissed and replaced by Étienne Charles Loménie de Brienne, Calonne fled (1787) to England, where he stayed until 1802. Many of Calonne's official papers have been published and two general works on politics have been translated into English, *Considerations on the Present and Future State of France* (1791) and *The Political State of Europe* (1796).

REFERENCES: ABF: I 175, 85-86, 95-120; II 116, 146-147. • Beauchamp, *Biographie Moderne*, 1816. • *Biographie Universelle*. • *Encyclopædia Britannica*, 11th edition. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefer). • WBI.

1023. — English, 1797 [Sale catalog].

Museum Calonnianum. | [tapered rule] | Specification | Of The | Various Articles | Which Compose The | Magnificent Museum | Of | Natural History | Collected By | M. De Calonne in France, | And lately his Property: | Consisting Of | An Assemblage | Of The Most | Beautiful And Rare Subjects | In | Entomology, Conchology, Ornithology, | Mineralogy, &c. | Among Which Are | The most elegant and finely-coloured of the Bird and Insect Tribes, the most splendid and uncommon Shells, many of | them unique; the various Ores of Gold, Silver, and other Metals, remarkable for Colour, Figure, or Richness; the | different Crystallizations of Spars, Fluors, &c. all the | high Gems, Agates, and other beautiful Stones; containing | many superb and valuable Specimens; together with some | curious Echini, Fish, Amphibia, matchless Ludi Naturæ, | being Portraits in Egyptian Pebbles, &c. and various | miscellaneous Subjects. | [wavy rule] | All which are

MUSEUM CALONNIANUM.

SPECIFICATION

OF THE
VARIOUS ARTICLES

WHICH COMPOSE THE

MAGNIFICENT MUSEUM

OF
NATURAL HISTORY

COLLECTED BY

M. DE CALONNE IN FRANCE,

And lately his Property:

CONSISTING OF

AN ASSEMBLAGE

OF THE MOST

BEAUTIFUL AND RARE SUBJECTS

IN

ENTOMOLOGY, CONCHOLOGY, ORNITHOLOGY,
MINERALOGY, &c.

AMONG WHICH ARE

The most elegant and finely-coloured of the Bird and Insect Tribes, the most splendid and uncommon Shells, many of them unique; the various Ores of Gold, Silver, and other Metals, remarkable for Colour, Figure, or Richness; the different Crystallizations of Spars, Fluors, &c. all the high Gems, Agates, and other beautiful Stones; containing many superb and valuable Specimens; together with some curious Echini, Fish, Amphibia, matchless Ludi Naturæ, being Portraits in Egyptian Pebbles, &c. and various miscellaneous Subjects.

All which are now exhibiting at Saville House, on the North Side of
Leicester Square, previous to the Sale thereof.

LONDON, May 1, 1797.

MUSEUM CALONNIANUM, 1797

now exhibiting at Saville House, on the North Side of | Leicester Square, previous to the Sale thereof. | [wavy rule] | London, May 1, 1797.

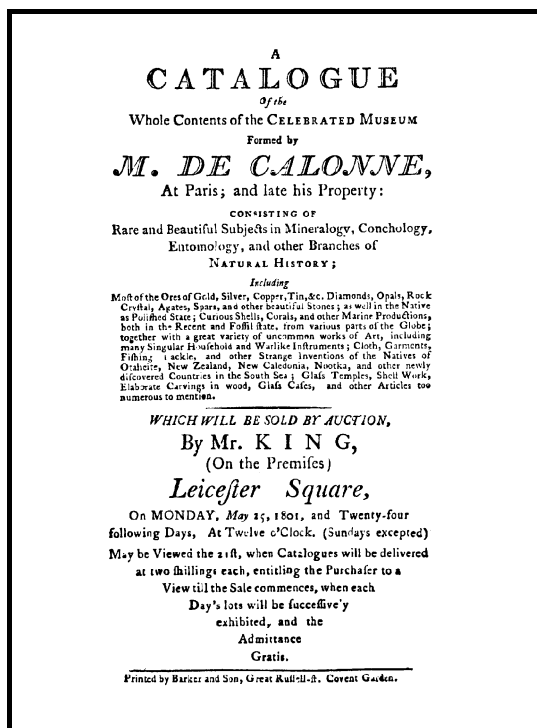
8°: viii, 84 p.

RARE. First and only part published of a proposed series describing Calonne's natural history cabinet. Prepared by the conchologist GEORGE HUMPHREY, Calonne's cabinet surely contained one of the largest and best known selection of shells in pre-Revolutionary France. This catalog is actually a pre-sale prospectus, providing detailed descriptions of 1,439 items. It is particularly rich in shell descriptions, but also contains particulars of other natural curiosities including some minerals. Being the finance minister of France, Calonne was in a position before his exile to obtain early information about the dispersal of other collector's cabinets, as well as the arrival of ships bringing home curiosities of the natural world from abroad. He had the means to pay premium prices, and in this way, Calonne built up a fine natural history collection that was world wide in scope. In fact, many of the objects were acquired by Calonne from major sales in France and England, particularly the dispersal of the cabinets of Prince Charles of Lorraine and the DUTCHESS OF PORTLAND. At Calonne's sale, many items subsequently passed into the collection of James Parkinson [see: *Organic Remains of a former World*, 3, 344]. A full sale catalog was subsequently published [which see next item] but with far less detail.

REFERENCES: BL: [956.d.31.]. • Dance, *Shell Collecting*,

CALZOLARI

1966: 91. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: 678.
• Murray, *Museums*, 1904: 2, 156.



CATALOGUE, 1801

1024. — English, 1801 [Sale catalog].

A | Catalogue | Of the | Whole Contents of the Celebrated Museum | Formed by | M. De Calonne, | At Paris; and late his Property: | Consisting Of | Rare and Beautiful Subjects in Mineralogy, Conchology, | Entomology, and other Branches of | Natural History; | Including | Most of the Ores of Gold, Silver, Copper, Tin, &c. Diamonds, Opals, Rock | Crystal, Agates, Spars, and other beautiful Stones; as well in the Native | as Polished State; Curious Shells, Corals, and other Marine Productions, both in the Recent and Fossil State, from various parts of the Globe; | together with a great variety of uncommon works of Art, including | many Singular Household and Warlike Instruments; Cloth, Garments, | Fishing Tackle, and other Strange Inventions of the Natives of | Otaheite, New Zealand, New Caledonia, Nootka, and other newly discovered Countries in the South Sea; Glass Temples, Shell Work, | Elaborate Carvings in wood, Glass Cases, and other Articles too | numerous to mention. | [tapered rule] | Which Will Be Sold By Auction, | By Mr. King, | (On

the Premises) | Leicester Square, | On Monday, May 25, 1801, and Twenty-four | following Days, At Twelve o'Clock. (Sundays excepted) | May be Viewed the 21st, when Catalogues will be delivered | at two shillings each, entitling the Purchaser to a | View till the Sale commences, when each | Day's lots will be successive'y | exhibited, and the | Admittance | Gratis. | [rule] | Printed by Barker and Son, Great Russell-st. Coven Garden.

8°: 170 p.

RARE. Auctioned at a house sale by King, the 3,037 lots consisted of shells, corals, minerals, petrifications, birds, ethnographical objects, and "artificial rarities." The sale was held in 1801 across the dates, May 25-30, June 1-6, 8-13, 15-20 and 22. In addition, a much smaller selection of 59 lots, including minerals, was sold by Christie's on July 9, 1803.

REFERENCES: BL. • Chalmers-Hunt, *Natural History Auctions*, 1976: 67, 68 & 78. • Murray, *Museums*, 1904: 2, 156. • Wilson, *History of Mineral Collecting*, 1994: 207.



CALZOLARI

CALZOLARI, Franciscus. (BORN: Verona, Italy, 1521; DIED: Verona, Italy, 1600) *Italian pharmacist & naturalist.*

Calzolari was a pharmacist and a citizen of Verona, in which he established an extensive museum of natural history objects that became famous throughout Europe.

Francesco Calceolari was a famous pharmacist in Verona and had a marvellous natural history collection which rivalled those of Aldrovandi, Mercati or Imperato. The cabinet is described by a contemporary as follows: 'a most abundant repository and true treasure of all remarkable medicinal things, in which I observed each one placed in wonderful order in most decorative and elegant compartments and cases. First, (Calzolari) sought exceptional herbs and then the rest from their own distant places and regions, sent to him as gifts from the greatest princes and rulers...' (Daston & Park, *Wonders and the order of nature*, 1150-1750, p. 154).

REFERENCES: ABI: I 231, 357-369. • *Biographie Universelle*: 6, 381. • *Catalogue of Portraits of Naturalists*: 253-4 [1 portrait listed]. • Daston & Park, *Wonders*, 1998:

p. 154. • *Dizionario Biografico Italiani*: 17, 65-7. • Edwards, *Early History of Palaeontology*, 1976: 43. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 592. • Mieli, *Gli Scienziati Italiani*, 1921: 1, 387-91, portrait. • WBI.

De reconditis, et praecipuis collectaneis ab Francisco Calceolario in musaeo adservatis, testificatio ... (Venetiis, 1584).

See: *Oliva (olivi)*, *Giovanni Battista (16th Century)*.

Mvsaevm Franc. Calceolari ivn. Veronensis a Benedicto Cervto medico inceptvm. Et ab Andrea Chiocco ... In que multa ad naturalem, ... (Veronæ, 1622)

See: *Ceruto, Benedicto*.

CAMERARIUS, Elias. (BORN: Tübingen, Germany, 17 February 1673; DIED: Tübingen, Germany, 6 February 1734) *German physician*.

Camerarius was professor of medicine at the University of Tübingen and brother of the botanist, Rudolph Jacob Camerarius [1665-1721].

REFERENCES: Poggendorff: 1, col. 365.

1025. — Latin, 1712.

Eliae Camerarii ... Dissertationes Taurinenses epistolicae, physico-medicae ... continentes annotationes in varia modernorum, Dn. de Noües cumprimis, ac Dn. Woodwardi scripta atque experimenta. Tubingæ, 1712.

8°: 376 p.

RARE. This is a collection of twenty letters, written during Camerarius' stay in Italy, while attending Prince Frederic-Louis de Württemberg, to whom he was personal doctor. Despite great scholarship and skepticism towards the work of others, Camerarius was an exceptionally credulous man who devoted himself zealously to mysticism and the secret arts, including alchemy. He opposed innovation and progress and was especially hostile to the iatrophysical methods then being developed for the treatment of disease. Among the letters published in this work is said to be one that annotates the geological theories on the origin of minerals and the earth of JOHN WOODWARD, which was reissued in some editions of Woodward's geological books.

REFERENCES: Eyles, V.A., "John Woodward, F.R.S., F.R.C.P., M.D. (1665-1728): a bio-bibliographical account of his life and work," *Journal for the Society of the Bibliography of Natural History*, 5 (1971), no. 6, 399-427, portrait, illus., biblio. • LKG: XIII 27a.

CAMPER, Petrus. (BORN: Leyden, The Netherlands, 11 May 1722; DIED: Haag, The Netherlands, 7 April 1789) *Dutch physician*.

Camper was a physician and professor of medicine at Franeker (1750), Amsterdam (1755) and Gröninge (1763). His mineralogical/geological collection was acquired by the University of Gröninge in 1820.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78: 3, 66-74. • BAB: 124, 233-278. • *Catalogue of Portraits of Naturalists*: 256 [4 portraits listed]. • Engel, *Dutch Zoological Cabinets*, 1986: p. 52-3. • Kobus, *Biographisch Woordenboek*, 1886. • NNBW: 1, cols. 552-6. • Poggendorff: 1, col. 368. • Visser, R.P.W., "Dutch palaeontologists of the 18th century," *Janus*, 62 (1975), 125-49.



CAMPER

1026. — French, 1789 [Part 1].

Lettres sur quelques objets de minéralogie, à Mr. le professeur Petrus Camper, etc. [By Prince D. A. Golitsuin.]. La Haye, 1789.

8°: 122 p., 6 plates.

RARE. Letters on some subjects of mineralogy from M.G. Forster to Petrus Camper. They were prepared for publication by DMITRII ALEKSYEYEVICH GOLITSYN (GALLITZIN). A second series was published in 1790.

REFERENCES: BL: [987.g.21.(1.)].

1027. — French, 1790 [Part 2].

Lettre à Mr. G. Forster, conseiller de la cour de S. A. E. de Mayence, bibliothécaire de l'université de Mayence, membre des Académies Royales des Sciences de Berlin, de Madrid, de l'Acad. Impériale Léopoldine, des Sociétés royales des Sciences de Londres, de Copenhague, de Göttingue, des Sociétés Royales d'Agriculture de Paris, et de Zell, de la Société d'Antiquités de Cassel, etc. etc. Pour servir de suite et de seconde partie, aux lettres écrites en 1789 à Mr. P. Camper [By Prince Dmitry Dmitrievich Golitsuin.]. A la Haye, 1790.

8°: [2], 54, [2] p., 8 plates.

RARE. Continuation of the letters on mineralogical subjects first published in 1789.

REFERENCES: BL: [987.g.21.(2.)]. • LKG: VI 104b. • NUC.

1028. — German, 1797 [German transl.].

Briefe über einige mineralogische Gegenstände an Herrn Peter Camper. Aus dem Französischen übersetzt und mit Anmerkungen vermehrt von F.A.A. Meyer. Göttingen, J. Chr. Dieterich, 1797.

8°: *6 A-O⁸ P²; 120^l.; [12], 228 p., 8 engraved plates (one colored), one map.

VERY SCARCE. A translation by Friedrich Albrecht

CANCERIN

Anton Meyer [1768-1795] of *Lettres sur quelques Objets de Minéralogie* (Paris, 1789-90). This translation contains the text of both of the previously published parts.

REFERENCES: BL: [726.f.5.]. • BMC: 1, p. 305. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 288. • LKG: VI 103a.

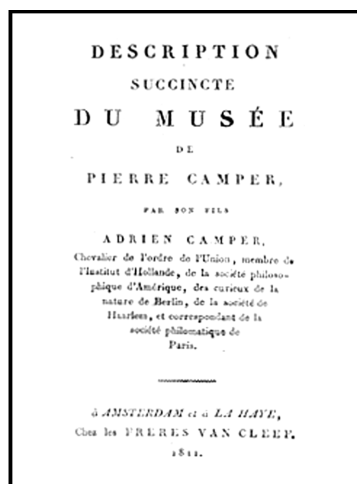
1029. — German, 1784-90 [Collected works].

Peter Campers sämtliche kleinere Schriften die Arzney- Wundarzneykunst und Naturgeschichte betreffend mit vielen neuen Zusätzen und Vermehrungen des Verfassers bereichert von J.F.M. Herbell. Leipzig, Siegfried Lebrecht Crusius, 1784-90.

3 vols. in six parts. [VOL 1, pt. 1: 1784] 8°: 157 p., 4 folding plates. [VOL 1, pt. 2: 1784] 8°: [10], 184, [4] p., 6 folding plates. [VOL 2, pt. 1: 1785] 8°: [6], 183 p., 4 folding plates. [VOL 2, pt. 2: 1787] 8°: [14], 182 p., 4 folding plates. [VOL 3, pt. 1: 1788] 8°: [12], 221 p., 4 folding plates. [VOL 3, pt. 2: 1790] 8°: [6], 183 p., 3 folding plates.

RARE. The collected works of Camper contains his writings on medicine, natural history and science. Each part of each volume has a special title page reading "Peter Campers ... kleinere Schriften die Arzney- und Wundarzneykunst und fürnehmlich die Naturgeschichte betreffend."

REFERENCES: BL: [954.c.1-3.]. • LKG: VI 102**. • NUC: 92, 382-4.

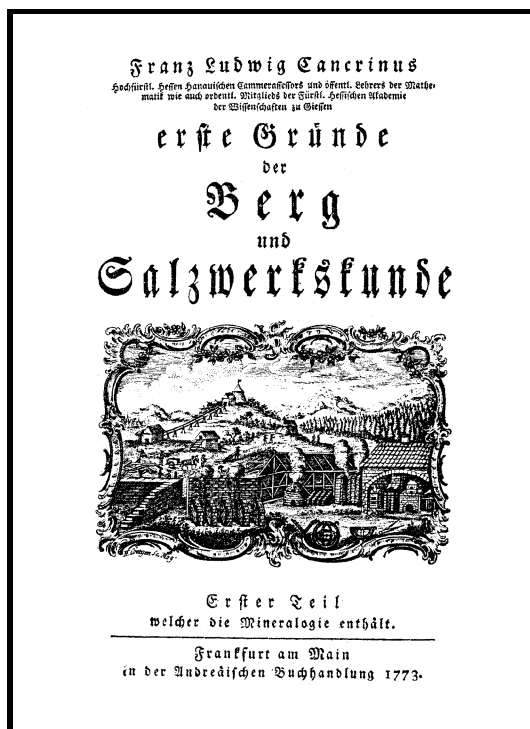


DESCRIPTION, 1811

1030. — French, 1811 [Collection catalog].

Description | Succincte | Du Musée | De | Pierre Camper, | Par Son Fils | Adrien Camper | [...7 lines of titles and memberships...] | [rule] | Amsterdam et à La Haye, | Chez les Frères Van Cleef. | 1811. 8°: viii, 93 p. PAGE SIZE: 210 x 125 mm.

RARE. The catalogue of Petrus Camper's cabinet. "Heir of the cabinet of natural history and



KURZER ENTWURF DER MINERALOGIE, 1773

medical objects of his father, which was bought by King William I for the University of Groningen (1820). During the great fire in 1906 the collection was partly destroyed. Part of his paleontological collection is at Haarlem (Teyler Museum). For several years Camper corresponded with George Cuvier, whom he supplied with descriptions and drawings of the fossils of his cabinet" (Engel). The catalogue consists of an introduction, followed by four sections: 1. "Anatomie du corps humain, combinée avec la pathologie," 2. "Anatomie et squelettes de mammifères," 3. "Débris d'animaux et de végétaux fossiles," and 4. "Fossiles, Minéral." The last section is the largest one covering pages 55-93.

REFERENCES: Engel, *Dutch Zoological Cabinets*, 1986: no. 273.

CANCERIN, Franz Ludwig von. (BORN: Breitenbach, Hesse, Germany, 21 February 1738; DIED: St. Petersburg, Russia, 1812 or 1816) *German mining expert.*

Cancrin was descended from a mining family and attended the University of Jena from 1759 to 1762. He became clerk in the Hanau assessor office, 1764, to which he was appointed assessor in the revenue office, 1767. Later, he became professor of mathematics at the Hanau Military Academy. In 1783, Cancrin entered the service of the Russian Empress Catherine II, including management of the Staraya Russa saltworks.

REFERENCES: ADB: 3, 740. • DBA: I 176, 371-397; II 214, 35-39. • DSB: 3, 41-2 [by M. Koch]. • *Encyclopaedia Britannica*, 11th edition. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 72. • NDB. • Poggendorff: I, col. 370. • WBI.

1031. — German, 1773.

Franz Ludwig Cancrinus | [...3 lines of titles and memberships...] | erste Gründe | der | Berg | und | Salzwwerkskunde | [vignette] | Erster Teil | welcher die Mineralogie enthält. | [rule] | Frankfurt am Main | in der Andreäischen Buchhandlung 1773.

8°: π^4)⁶ A-T⁸ U²; 157ℓ.; [20], [1]-272, [22] p., woodcut device on half-title, engraved vignette on title. PAGE SIZE: 162 x 89 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [8 pgs], Dedication to the Kaiser and Mrs Catherina.; [10 pgs], "Vorrede."; [1]-48, Text.; [49], Sectional title page, "Erste Gründe | Der | Mineralogie."; [50], Blank.; [51]-272, Text.; [22 pgs], "Register."

RARE. This is a general introduction to mineralogical science that formed the first part of Cancrin's monumental *Erste Gründe der Berg und Salzwwerkskunde* [see note below]. This volume also contains a general forward to the complete work.

English transl., c1980: *First principles of the science of mining and salt mining. Part one, containing the Mineralogy.* By Franz Ludwig Cancrinus. Translated from the original text, with a preface and notes, by Kenneth V. Bordeau and Elvi Legel Bordeau. Boulder, Colo., Geological Society of America, c1980. 2 microfische. [Published as: The Geological Society of America, Inc., Microform Publication, no. 10.]

Related work: The *Erste Gründe der Berg und Salzwwerkskunde* is considered the most complete work on mining and the refining of minerals, metals and salt written in the 18th century. It was published in Frankfurt am Main from 1773 to 1791 in 12 Teilen [DSB incorrectly says 21]. This rare series is a difficult bibliographical problem. Although incomplete, the list below provides some help with paginations of the various sections.

Teil 1, 1773: [20], 272, [22] p. [Mineralogie].

Teil 2, 1773: [8], 296, [14] p. [Probierkunst].

Teil 3, 1773: [8], 72, [7] p., 3 folding plates. [Oberirdische Erdbeschreibung].

Teil 4, 1773: [8], 72, [7] p., 8 folding plates. [Unterirdische Erdbeschreibung].

Teil 5, 1774: [12], 244, [16] p., 57 folding plates. [Kurzer Entwurf der Grubenbaukunst].

Teil 6, 1775-6: 2 parts. [8], 808, [60] p.; [8], 304, xxxi, [24] p., 65 folding plates, one folding table. [Arithmetik, Geometrie und Trigonometrie].

Teil 7, 17 : 3 parts.

Teil 8, 1782: [10], 158, [8] p., 21 folding plates. [Scheide oder Aufbereitungskunst der Mineralien].

Teil 9, 1784-8: 4 parts. [12], 432, [18] p.; [2], 21 p. (=Anhang.); [10], 168, [5] p.; [12], 216, [14] p., 222 folding plates. [Gründliche Anleitung zur Schmelzkunst und Metallurgie].

Teil 10, 1788-9: 3 parts. [16], 270, [26] p.; [10], 284, [18] p.; [10], 210, [20] p., 52 folding plates, 3 folding tables. [Entwurf der Salzwwerkskunde].

Teil 11, 1790: 5 parts, [2], x, 210 p.; [2], viii, 162 p.; x, 146 p.; x, 110 p.; x, 67, [35] p. [Berg- und Salzrecht: covering mining laws of Germany].

Teil 12, 1791: 80 p., one folding table. [Abhandlung von der Anlage, dem vortheilhaftesten Bau und der Unterhaltung der Röhrbrunnen].

REFERENCES: BL: [no copy listed]. • *Freilich Sale Catalog*: no. 117. • Internet search. • Jonathan Hill, Bookseller: cat. 16 (1994), nos. 26. • Poggendorff: 1, col. 370.

1032. — German, 1789.

Abhandlungen vom Torfe, Dessen Ursprung,

Nachwuchs, Aufbereit, Gebrauch etc. Marburg, 1789.

8°: VERY SCARCE.

REFERENCES: LKG: XVI 445.

1033. — German, 1801 [Another edition].

Abhandlungen vom Torfe. Marburg, 1801.

8°: VERY SCARCE.

REFERENCES: LKG: XVI 445.

1034. — German, 1787.

Franz Ludwig von Cancrin Geschichte und systematische Beschreibung der in der Grafschaft Hanau Münzenberg in dem Amte Bieber und anderen Aemtern dieser Grafschaft, auch den dieser Grafschaft benachbarten Ländern gelegenen Bergwerke. Leipzig, Christian Gottlieb Hertel, 1787.

8°: 10, 190 p., one plate. VERY SCARCE.

REFERENCES: BL: [972.f.13.]. • LKG: XIV 279.

1035. — German, 1767.

Franz Ludwig Cancrinus fürstlich hessenhanauischen Rentcammersecretärs Beschreibung der vorzüglichsten Bergwerke in Hessen, in dem Waldeckischen, an dem Haarz, in dem Mansfeldischen, in Chursachsen, und in dem Saalfeldischen. Frankfurt an dem Main, In der Andreäischen Buchhandlung, 1767.

4°: π^4 **⁴ A-Iii⁴ Hhh³; ??ℓ.; [16], 429, [3] p., 11 plates (partly folding), title vignette. Head and tail pieces. Topographical – Germany – Mines and mineral resources. RARE.

REFERENCES: BL: [457.a.10.]. • Hoover Collection: no. 203. • LKG: XIV 49. • NUC: 93, 591-3.

CANDINA, Giulio.

REFERENCES: LKG: 282.

1036. — Italian, 1785.

Sulla formazione del molibdeno lettera di Giulio Candida al Signor Vincenzo Petagna ... Napoli, Presso Giuseppe-Maria Porcelli, 1785.

8°: A-D⁸; 32ℓ.; 61, [3] p. Title vignette.

RARE. Study on molybdenum in the form of a letter to Vincenzo Petagna [1730-1810].

REFERENCES: BL: [B.550.(5.)]. • LKG: XVI 357.

CANFIELD, Frederick Alexander. (BORN: 7 April 1849; DIED: Dover, New Jersey, U.S.A., 3 July 1926) *American mining engineer & mineral collector.*

Canfield grew up in an environment surrounded by minerals. His father, Frederick Canfield, had gathered together a choice selection of minerals of the Franklin zinc mines and the son preserved them in their original cases has his father had originally arranged them in 1856. Both father and son were mining men, and their home was built in the midst of the iron mines.

After the death of his father in 1865, Canfield began his own collection of minerals and continued to add to it throughout his lifetime. Early on he specialized in the minerals of New Jersey, particularly those of the more prolific localities like Franklin and the zeolites of Bergen

CANTOR



CANFIELD

Hill and Paterson. Here were contained specimens of franklinite and gahnite as sharp octahedra measuring 5 inches on the edge. Besides his unique and rich suites of local minerals, Canfield's collection became a general one and ultimately grew to between 8,000 and 9,000 specimens. These he selected with great care and they were catalogued and labeled with great accuracy. Special attention should be given to the specimens he collected in Bolivia in 1885-7, including a rough single crystal of argyrodite 6 inches across and weighing 14 lb. Canfield bequeathed his mineral collection to the SMITHSONIAN INSTITUTION together with an endowment of \$50,000 to insure its care and continued growth. There it remains intact today. Few private collections have exceeded its completeness of fine quality of the its individual specimens. As regards the suites of minerals from its native state it was unmatched, and as a primary source of material it was used extensively by Charles Palache [1869-1954] in his famous monograph of the Franklin deposit which appeared in 1935.

REFERENCES: ABA: I 252, 1-11. • *American Mineralogist*: 12 (1927), 67-70, portrait. • Cleevly, *World Palaeontological Collections*, 1983: p. 76. • *Mineralogical Magazine*: 21 (1927), no. 117, 231-2. • *Rocks & Minerals*: 42 (1967), 952. • Roe, A., "Frederick A. Canfield, his life and his mineral collection," *Mineralogical Record*, 21 (1992), 31-39. • Sarjeant, *Geologists*, 1980: 2, 687. • WBI.

1037. — English, 1888.

Catalogue of minerals found in New Jersey by Frederick A. Canfield. Trenton, N.J., 1888.

8°: [1]-23, 24a-b p. "Supplemental notes to the Catalogue of minerals found in New Jersey", p. 24a-b. Published as: *New Jersey. Geological survey. ... Final report of the State Geologist*, 1888, vol. 2, pt. 1.

VERY SCARCE. An early (first?) list of the minerals found in the state of New Jersey compiled by its most knowledgeable expert.

REFERENCES: NUC.

1038. — English, 1923.

The | Final Disposition | Of Some | American Collections | Of | Minerals | Compiled By | Frederick A. Canfield | Dover, N.J. | 1923.

8°: [1]-20 p. Brown printed wraps. PAGE SIZE: 230 x 155 mm.

CONTENTS: [1-2], Title page, verso blank.; 3, "Preface."; 4-20, "Collections."—in alphabetical order by

the collector's last name.

VERY RARE. A fascinating compilation indicating the fates of many American mineral collections. Canfield, a first rate collector for his entire life, was in the habit of collecting notices about other mineral collections from newspapers, magazines and personal knowledge. Toward the end of his life, he privately published this accumulation, which in many instances is the only reference that a particular collection even existed.

Reprinted, 1990: "Final Disposition of Some American Collections of Minerals", published in *The Mineralogical Record*, 21 (1990), 39, 41-46. The complete text has been reset and included as an article.

REFERENCES: NUC.

CANTOR, Johann Chrysostomus. (BORN: 31 March 1775; DIED: 29 August 1815) *German Benedictine monk & naturalist*.

REFERENCES: DBA: I 177, 344-356. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, col. 372. • WBI.

1039. — German, 1804-5.

Geschichte der merkwürdigsten Naturbegebenheiten auf unserer Erde von Christi Geburt bis auf gegenwärtige Zeiten. Von Johann Chrysostomus Cantor ... Koburg, J.C.D. Sinner, 1804-5.

3 vols. [VOL 1: 1804] 12°: [VOL 2: 1804] 12°: [VOL 3: 1805] 12°: 335 p.

VERY RARE. Cantor's *History of the Strangest Natural Occurrences of our Earth from the Time of Christ to the Present* includes discussions of earthquakes, the climate, biblical flood, geological catastrophes, etc. This appears to be more directed toward geology, but may contain some mineralogical content.

REFERENCES: LKG: XIII 233.

CAPPEL, Joachim Diedrich. (BORN: Wismar, Germany, 13 February 1717; DIED: Copenhagen, Denmark, 4 February 1784) *German apothecary*.

Cappel learned the apothecary trade in Riga. He then continued his studies in St. Petersburg. Moving to Copenhagen in 1747, he opened a successful shop. In 1756 until his death he held the position of apothecary to the Königlichen Frederiks Hospitals. He built a large collection of natural history objects which was auctioned after his death. Some of the minerals were purchased by the University of Copenhagen.

REFERENCES: Dam & Schæffer, *Danske Apotekers Historie*, 1928-85: 310-4. • *Dansk Biografisk Lexikon*. • *Deutsche Apotheker Biographie Supplement I*: 63-4. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, ?? . • Nyrop, C., *Der kongelige Frederiks Hospitals apotekere*. Copenhagen, 1918. • Poggendorff: 1, col. 373. • Roemisch, B., "Die deutschen Apotheken im alten Dänemark," *Deutsche Apotheker-Zeitung*, 54 (1939), ?? [see p. 908]. • Schou, S.A., "Apotekeren, kemikeren og legatstifteren Joachim Dietrich Cappel (1717-1784)," *Arch. Pharm. og Chemi*, 125 (1968), 781-813. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 164.

1040. — German, 1785 [Sale catalog].

Des Herrn Apothekers Joachim Diedrich Cappel hinterlassene Sammlung von Naturalien besonders

Conchylien und Mineralien. Die d. April 1785 in der Wohnung des Apothekers ... öffentl. verauctionirt werden sollen ... Copenhagen, Möller, 1785.

8°: 49 p.

RARE. Auction sale catalog of the apothecary Cappel's natural history cabinet that consisted primarily of minerals and shells. The sale took place in April 1785 in Copenhagen.

REFERENCES: BL: [no copy listed].



CAPPELLER

CAPPELLER, Moritz Anton. (BORN: Willisau, Canton Lucern, Switzerland, 9 June 1685; DIED: Münster, Switzerland, 16 September 1769) *Swiss physician & naturalist.*

Cappeller was a physician and a member of the high advisory council in Lucern. He worked as a field doctor for Swiss troops along the Italian border.

REFERENCES: DBA: I 1426, 398-402. • Drugulin, *Sechstausend Portraits*, 1863: no. 831. • Fueter, *Grosse Schweizer Forscher*, 1941: portrait. • Lambrecht & Quenstedt, *Catalogus*, 1938: 227. • Poggendorff: 1, col. 373 & 7a, 129-30. • Sarjeant, *Geologists*, 1980: 2, 1421. • WBI. • Weber, Peter Xaver, "Dr. Moritz Anton Cappeller, 1685-1769," *Der Geschichtsfreund. Mitteilungen des Historischen vereins der fünf Orte Lucern, Uri, Schweiz, Unterwalden und Zug*: 70 (1915), 157-249.

1041. — Latin, 1723.

Prodromus | Crystallographiæ | de | Crystallis Impropræ Sic | Dictis | commentarium. | A. | Maurit. Ant. Cappeller M.D. & Centrumviro | Lucernensi. | [ornate rule] | [...7 lines of Latin quotation signed Galilæus Saggiatore...] | Lucernæ | [ornate rule] | Typis Henrici Rennvardi Wyssing. | MDCCXXIII.

4°: 43 p., 3 engraved plates.

VERY RARE. An important and highly regarded crystallographic work, the *Prodromus Crystallographiæ* is among the first works to use of the word crystallography. By examining a great variety of inorganic substances, sometimes even employing a

PRODRONUS CRYSTALLOGRAPHIÆ DE CRYSTALLIS IMPROPRIE SIC DICTIS COMMENTARIUM.

A.

Maurit. Ant. Cappeller M. D. & Centrumviro
Lucernensi.

Philosophia Naturalis scripta est in maximo isto Libro qui continuo nobis ante oculos jacet apertus (Universeum hoc aqo) sed nihil aut in eo legi, aut intelligi poterit, nisi prius addiscatur Idioma quo excavatum est. Characteres ejus sunt Triangula, Circuli & aliæ Figuræ Geometricæ: sine istarum cognitione nec verbum quidem intelligitur sine is idem est, ac in tenebroso labyrintho maniter vagari. Galilæus In Saggiatore.

LUCERNÆ.

Typis Henrici Rennvardi Wyssing,
MDCCXXIII.

PRODRONUS CRYSTALLOGRAPHIÆ, 1723

magnifying glass, Cappeller concluded that a finite set of basic crystal forms existed. These he defined as the equivalent of dendritic, polyhedral, prismatic, pyramidal, rounded, cylindrical, boytroidal and crust-like. Any stone, salt, metal or earth he examined could be classified under one of these forms. However, since the author also believed the manner of origin affected a substances' crystal shape, the same mineral theoretically might appear in more than one category. Although Cappeller misinterpreted physical form as the equivalent of crystal form, his attempt at systematic mineral description was better than any other of the period because it emphasised crystal shape as the primary distinguishing characteristic.

REFERENCES: BL: [B.366.(5.)]. • Burke, *Origins of the Science of Crystals*, 1966: 56-7. • Burmester, *Kristallographischen Zeichnens*, 1922: 19-20. • Cobres, *Deliciæ Cobresianæ*, 1782: 2, 721-2. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 260. • Groth, *Entwicklungsgeschichte*, 1926: 4. • Katalog Bergakademie Freiberg, 1879: p. 117. • LKG: IX 1 & 2. • Metzger, *Genèse de la Science des Cristaux*, 1918: 41-4. • Weber, Leonhard, "Die 'Crystallographia' des Luzerner Arztes Dr. Moritz Anton Cappeller," *Schweizerische Mineralogische und Petrographische Mitteilungen*, 3 (1923), 113-52. • Weber, Peter Xaver, "Dr. Moritz Anton Cappeller, 1685-1769," *Der Geschichtsfreund. Mitteilungen des Historischen vereins der fünf Orte Lucern, Uri, Schweiz, Unterwalden und Zug*: 70 (1915), 157-249.

1042. German transl., 1922: Moritz Anton Cappellers | Prodromus | Crystallographiæ | Mit Unterstützung | Der Naturforschenden Gesellschaft In Luzern | Und Anderer | Schweizer Freunde Der Naturwissenschaft | Herausgegeben Und Übersetzt | von | Dr. Karl Mieleitner | In München | München 1922 | Kunst- Und Verlagsanstalt Piloty &

CARAFÀ

Loehle.

8°: [i]-viii, [1]-39, [1] p., 3 plates, [1]-47, [1] p. Bound in a grey-blue printed wrap, with the title page reproduced in a double line border on the front cover. PAGE SIZE: 272 x 185 mm.

CONTENTS: [i-ii], Half title page, "Prodromus | Crystallographiae," verso blank.; [iii-iv], Title page, verso "Dr. C. Wolf & Sohn | Universitätsbuchdruckerei und lithographische Kunstanstalt | in München.;" v-viii, "Vorwort des Herausgebers.;" [1], Reproduction of the original title page.; [2], Blank.; Reproduction of original dedication to Johann Jacob Scheuchzer.; [4], Blank.; 5, "Benevole Lector.;" 6, "Ordo juxta quem Crystalli minus proprie sic dicti, ...;" 7-19, Text in Latin.; [20], Recensio | Crystallissatorum | Corporum | Quae improprie Crystalli vocantur.;" 21-39, Text in Latin describing the division of species.; [1], Blank.; Reproduction of 3 plates on three leaves from the original edition.; [1 pg], "Abhandlung | Über Die Sogenannten Kristalle | Vorläufer | Einer Kristallographie | von | Moritz Anton Cappeller | In Luzern | ...;" [2], Blank.; 3, "Geneigter Leser!;" 4, "Ordnung, nach der die sogenannten Kristalle oder die übrigen außer dem | ...;" 5-21, "Abhandlung über die sogenannten Kristalle.;" 22-45, "Aufzählung der kristallisierten Körper, die Kristalle | genannt werden.;" 46-47, "Anhang. | Verzeichnis der von Cappeller in seinem Prodromus | benutzten Werke.;" [1 pg], Blank.

VERY SCARCE. Translation by KARL MIELEITNER from *Prodromus Crystallographiae* (Lucernæ, 1723). The original edition was the first work ever to use the word "crystallography" in a modern sense. The introduction to this translation gives biographical details of Cappeller and some historical information about the *Prodromus*. The Latin text is then given, followed by reproductions of the three plates of crystals from the 1723 edition. The remainder is devoted to the German translation, of which, the last two pages are a listing of all the works Cappeller referenced in the *Prodromus*.

REFERENCES: Weber, Leonhard, "Die 'Crystallographia' des Luzerner Arztes Dr. Moritz Anton Cappeller," *Schweizerische Mineralogische und Petrographische Mitteilungen*, 3 (1923), 113-52.

CAPUA, Lionardo Di. (BORN: Bagnoli, Italy, 1617; DIED: Naples, Italy, 17 June 1695) *Italian physician.*

REFERENCES: ABI: II 206, 360. • LKG: 282. • Poggendorf: 1, col. 1425. • WBI.

1043. — Italian, 1683 [First edition].

Lezioni intorno alla natura delle mofete di Lionardo di Capoa. In Napoli, Per Salvatore Castaldo Reg. Stamp., 1683.

4°: a-b⁴ A-Aa⁴; 104ℓ.; [16], 179 (i.e., 176), [16] p. Page 176 misnumbered 179. Engraved armorial vignette (arms of Queen Christina of Sweden, to whom the work is dedicated?). Head- and tail-pieces, initials. Includes index. The two final leaves are of errata. PAGE SIZE: 215 x 160 mm.

VERY RARE. Early work describing in a series of lessons the nature of the Mofete geothermal field of Campania in Italy. Capua makes notice of the deadly effects of obnoxious sulfur gases leaking from the ground of the region.

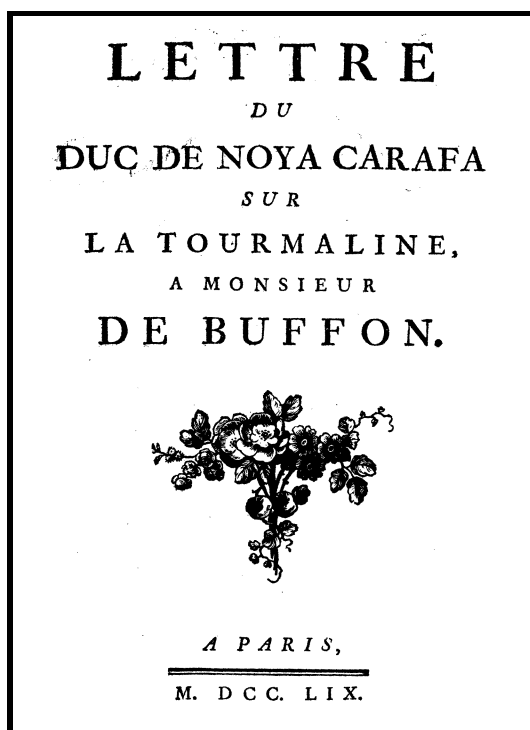
Reissue, 1714: *Lezioni intorno alla natura delle Mofette*. Cologne, 1714. 8°. Extremely rare. No copy traced.

REFERENCES: *Acta Eruditorum*: 1683, p. 367. • BL: [234.f.4.]. • Bohmer, *Bibliotheca Historiae Naturalis*, 1785-9: 4, 358. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 118. • Gmelin, *Geschichte der Chemie*, 1797-9: 2, p. 113-4. • LKG: XIV 550.

CARAFÀ, Giovanni, Duca di Noja. (BORN: Naples, Italy, 1715; DIED: Naples, Italy, 1768) *Italian Duke.*

In his youth, Carafa studied grammar and literature, learning how to write elegant Italian. His interests turned to scientific matters, especially mathematics. Through the use of private tutors, he advanced to the University level. In 1738, he was named a reader in optics and mathematics at the University of Naples. While there, he became interested in the natural sciences especially mineralogy, geology and botany. He began collecting in these area, creating an extraordinary garden at his Naples estate. In 1743, Carafa entered the military, and was rewarded for his valor by royal appointments to civil service positions. From 1750 to 1760, he made extensive trips throughout Europe and Russia, meeting many of the great scientists of the day.

REFERENCES: ABI: II 111, 421. • *Dizionario Biografico Italiano*: 19, 561-2. • WBI.



LETTRE, 1759

1044. — French, 1759.

Lettre | Du | Duc De Noya Carafa | Sur | La Tourmaline, | A Monsieur | De Buffon. | [ornament] | A Paris, | [double rule] | M. DCC. LIX.

4°: [1]-35, [1] p., one folding plate. Ornamental head- and tail-pieces. PAGE SIZE: 240 x 190 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-35, Text.; [1 pg], Blank.

VERY RARE. In this letter to Count Buffon, Carafa provides his observations on the tourmaline, including one of the earliest written descriptions of the pyroelectricity property of the mineral. During a trip to Paris in 1759, Carafa witnessed experiments on electricity using a variety of substances including

tourmaline. By heating the mineral a weak electrical field is generated. This field manifests itself in the heated stone by attracting small bits of paper and ash to it like a magnet. On his return to Italy in September, 1759 Carafa repeated the experiments he had witnessed at the Società Colombaria in Florence, and this short monograph records the results of that demonstration in the form of a letter to Count Buffon. Aepinus thought the work of enough merit that he reprints it with commentary in his *Recueil des Differents Memoires sur la Tourmaline* (St. Petersburg, 1762).

Some libraries list this work under an author heading of Noya Carafa, Duke de, pseud. [i.e., Michel Adanson]; however this is incorrect. According to the *Dizionario Biografico Italiani*, Duke de Noya Carafa actually lived and authored this book.

REFERENCES: BL: [444.c.24.]. • LKG: XVI 404. • Mottelay, *History of Electricity & Magnetism*, 1922: [not mentioned]. • Personal communication: [Title page courtesy of the Bakken Library, Minneapolis, Minnesota.]. • Ronalds, *Catalogue*, 1880: p. 372.



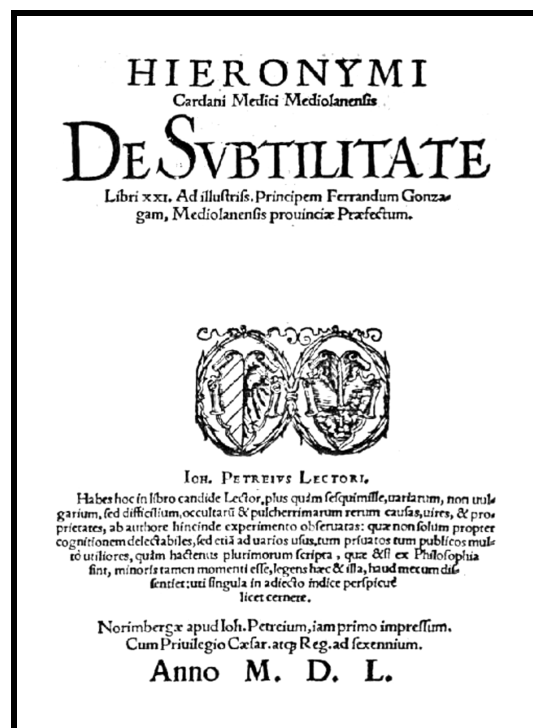
CARDANO

CARDANO, Girolamo. (BORN: Pavia, Italy, 24 September 1501; DIED: Rome, Italy, 20 September 1576) *Italian physician, mathematician & astrologer.*

Cardano was educated at the University of Padua, and became a public lecturer in geometry at Milan in 1534. In 1559, he was appointed professor of medicine at Pavia and then Bologna in 1562. Cardano was arrested for heresy or debt or both in 1570. Afterwards he moved to Rome, where in 1571 he was pensioned by Pope Pius V. Cardano was a self promoter, claiming more than was true when he took credit for the cubic solution discovered by Nicolò Tartaglia. During his life, however, he authored over 100 books on mathematics, medicine, physics, philosophy, religion and music. For his mathematical innovations, "he is justly considered the originator of the theory of algebraic equations." (DSB). Cardano was also the first to write on mathematical probability.

REFERENCES: ABI: I 252, 226-304; II 113, 194-197. • Aquilecchia, G., *Girolamo Cardano: le opere, le fonti, la vita* scritti di G. Aquilecchia ... [et al.]; a cura di Marialuisa Baldi e Guido Canziani. Milano, Franco Angeli, c1999. 589 p., illus. [Published

as: *Filosofia e scienza nel Cinquecento e nel Seicento*; ISBN 88-464-1165-X]. • Benvenuti, *Dizionario degli Italiani all'Esterio*, 1890. • Capparoni, *Profilo Bio-Bibliografico*, 1928-32: 2, 39-42, portrait. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 260 [5 portraits listed]. • *Dizionario Biografico Italiani*: 19, 758-63. • DSB: 3, 64-67 [by Mario Gliozzi]. • Eitner, *Quellenlexikon*, 1959. • *Encyclopaedia Britannica*, 11th edition. • Fierz, M., *Girolamo Cardano, 1501-1576: Physician, natural philosopher, mathematician, astrologer, and interpreter of dreams*. Translated by Helga Niman. Boston, Birkhäuser, 1983. xxii, 202 p. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Imperatori, *Dizionario di Italiani all'Esterio*, 1956. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Kessler, E., ed., *Girolamo Cardano: Philosoph, Naturforscher, Arzt*. Hrsg. von Eckhard Kessler. Wiesbaden, Harrassowitz, 1994. xi, 376 p. [Published as: *Wolfenbüttler Abhandlungen zur Renaissanceforschung*, vol. 15.]. • Lindsay, R.B., "Jerome Cardan, 1501-1576," *American Journal of Physics*, 16 (1948), 311-7. • Margolin, J.-C., "Cardan, interprète d'Aristote," (pp. 307-334) in: *Platon et Aristote à la Renaissance*, Paris, Vrin, 1976. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 601-2. • Mazzetti, *Repertorio di Tutti i Professori*, 1848. • Michel, A., "Scaliger, Cardan et la subtilité," (pp. 49-66) in: *Du Pô à la Garonne: Recherches sur les échanges culturels entre l'Italie et la France à la Renaissance*. Agen, Centre Matteo Bandello, 1990. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 376-7. • Siraisi, N.G., *The clock and the mirror: Girolamo Cardano and Renaissance medicine*. Princeton, Princeton University Press, c1997. xiv, 361 p., illus. [ISBN 0-691-01189-3]. • WBI.



DE SUBTILITATE LIBRI XXI, 1550

De Subtilitate Libri XXI

1045. — Latin, 1550 [First edition, folio].

Hieronymi | Cardani Medici Mediolanensis | De Svbtilitate | Libri XXI. Ad illustriss. Principem Ferrandum Gonza= | gam, Mediolanensis prouinciæ Præfectum. | [ornament] | Ioh. Petreivs Lectori. | Habes hoc in libro candide lector, plus quàm sesquimille, uariarum, non uul= | garium, sed difficilium, occultarū & pulcherrimarum rerum causas, uires, & pro= | prietates, ab authore hincinde experimento obseruatas: quæ non solum propter | cognitionem delectabiles, sed citā ad uarios usus, tum priuatos tum publicos mul= | es utiliores, quim hactenus plurimorum scripta, quæ & si ex Philosophia | sint, minoris ramen momenti esse, legens hæc & illa, haud mecum dif= | fentier: uti singula in a adiecto indice perspicuē | licet cernere. | Norimbergæ apud Ioh. Petreium, iam primo impressum. | Cum Priuilegio Cæsar. atq; Reg. ad sexennium. | Anno M. D. L.

2°: A-C⁴ D⁶ a-z⁴ aa-yy⁴ zz⁶ (D⁶ blank); 204ℓ.; [36], 371 p., woodcut arms on title, portrait of Cardano on reverse of title, woodcuts and diagrams in text. Ornamental editions, marginal annotations and illustrations. COLOPHON: Impressum Norimbergæ per Iohan. Petreium, Anno salutis M.D.L.

RARE. Cardano's famous and often reprinted work, *De Svbtilitate* [=The Subtlety] represented the most advanced presentation of physical knowledge up to its time, eclipsing the ancient works of Pliny and Albertus Magnus. It was highly influential, though not always stated, in directing scientific thought during the late Renaissance. In fact, the Italian philosopher and scholar Julius Caesar Scaliger [1484-1558] was disturbed enough by its content that he violently criticized *De Svbtilitate* in his *Exotericarvm Exercitationvm* (Paris, 1557, and later editions), which was answered by Cardano in the 1560 Basel edition of *De Svbtilitate*.

Essentially an encyclopedia, in *De Svbtilitate* one can find some article on almost every subject, including substantial sections on technology, medicine, chemistry, mathematics, various branches of the occult, mineralogy, gemology, hydrodynamics, geology, electricity, etc, and descriptions of numerous experiments and apparatus, including the pumps and the screw of Archimedes and a system of Braille writing for the blind. It is thought by some to be based on the manuscript notes of Leonardo Da Vinci; however, it is more probably the sole work of Cardano's penetrating but erratic genius. The text also incorporates many woodcut illustrations which add considerably to the descriptions.

Cardano organized his text along the same principle used in the arrangement of the writings of Aristotle, dividing the work into twenty-one long books. The first twelve deal with the physical world, beginning with the principles and elements, air, light, proceeding to inanimate objects like metals, stones, plants, then to animals, and concluding with a discussion of man. The

subsequent nine books describe the immaterial world, again in ascending order, starting with the senses, activities of the intellect and concluding with the spiritual powers, demons, angels, and finally God. The writing style is sometimes clear, sometimes torturous, and in some cases impossible to understand, which provides a rambling dialog in the descriptions.

Of concern to mineralogy are principally book 6 (metals) and book 7 (stones). Cardano shows a modified Aristotelian idea of the physical world by omitting fire and accepting only three elements: earth, air and water. Repeating the facts and fantasies of the ancients, Cardano believed bodies found with in the earth were divided into four genera: earths, juices, stones and metals. Various actions of heat on mixtures of these substances gave rise to all stones, minerals and metals. Thus, clay and minum are grouped in the earths and diamonds, onyx, marble, jasper and quartz are considered stones. The seven metals grow in the earth from seed and are thought to have life. They are also each associated with one or more planets. Cardano also attempts without much success to represent the hexagonal form of quartz by close packing of spherical particles.

Partial English transl., c1934: *The first book of Jerome Cardan's De svbtilitate translated from the original Latin, with text, introduction and commentary, by Myrtle Marguerite Cass ...* Williamsport, Penna., The Bayard Press, [c1934]. 191 p., including frontispiece., illus.

Translation by Myrtle Marguerite Cass [1908-] as part of the qualifications for a Ph.D. degree in history, from Columbia University, 1933. "The Latin text is printed as it appears in the Basel (1560) edition with ... [a few] exceptions."—Preface.

REFERENCES: Adams, *Cambridge Books*, 1967: C-668. • Beekman, *Systematische Mineralogie*, 1906: 24-5. • Caillet, *Manuel*, 1912: no. 2017. • Dibner, *Heralds of Science*, 1955: no. 139. • DSB: 3, 66. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 116-7. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 141-3. • Ferguson, *Histories of Inventions*, 1981: Suppl. 1, pp. 21-3. • Fierz, M., *Girolamo Cardano, 1501-1576: Physician, natural philosopher, mathematician, astrologer, and interpreter of dreams*. Translated by Helga Niman. Boston, Birkhäuser, 1983. xxii, 202 p: [see chap. 4, pp. 88-116]. • Hoover Collection: no. 205. • LKG: III 17. • Norman Catalog: 401. • NUC: 95, 79-86 [NC 0128197]. • Partington, *History of Chemistry*, 1961-70: 2, 9-15 [Discusses the contents]. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Schütze, *Naturphilosophie*, c2000: [Edition A]. • Sinkankas, *Gemology Bibliography*, 1993: no. 1145 ["substantial content of information on gemstones."]. • Stillwell, *Awakening Interest in Science*, 1970: pp. 329 & 745. • Thorndike, *History of Magic*, 1923-58: 5, 563. • VD16: C-931. • Wellcome Catalog (Books): 1, no. 1290.

1046. Octavo edition, 1550: Hieronymi | Cardani Medici Mediola- | nensis, | * | De Svbtilitate | Libri XXI. | Ad illustriss. Principem Ferrandum Gon- | zagam, Mediolanensis Prouinciæ | Præfectum. | Neqve | [Text running vertically along the left-hand side of the device:] Neqve Mars, | [Printer's device] | [Text running vertically along the right-hand side of the device:] Venenvm. | Parisiis, | Ex officina Michaëlis Fezandat, & Roberti | Granlon, in monte D. Hylarii sub Iuncis. | [short rule] | 1550.

8°: Aa-Cc⁸ a-z⁸ A-Q⁸ (Cc⁸ blank); 336ℓ.; [24]ℓ., 312 numb.ℓ., illus. No pagination, foliation and signatures only. Printer's device on the title page. In the AzU copy, the complete signature Bb is wanting. PAGE SIZE: 170 x 112 mm.

CONTENTS: Aa1r, Title page.; Aa1v, "Lectori, S.";

Aa2r-Aa4r, Dedication, with text reading: "Illvstriss. Et Ex- | cellentissimo Ferrando Gonzaghæ, | Mediolanensis provinciae Praefectum."; Aa4v, Listing of the titles of the 21 books contained in the text (Liber 6, "De Metallis"; Liber 7, "De Lapidibus"); Aa5r-Cc7v, "Index Rervm Maxime."; Cc8, Blank.; Folios 1-312 (=a1r-Q8r), Text.; Q8v, "Carmen Tho. Venatorij in lau- | dem Cardan."

RARE. Octavo edition issued in Paris the same year as the first edition, which was published as a folio.

REFERENCES: Brunet: 1, 1572. • NUC: 95, 79-86 [NC 0128198]. • Schütze, *Naturphilosophie*, c2000: [Edition B]. • Shaaber, *Sixteenth Century Imprints*, 1976: C-129.

1047. 1551: Hieronymi Cardani medici mediolanensis De subtilitate libri XXI ... Parisiis, Apud Mathurinum [Dupuys ...], 1551.

8°: Aa-Cc8 a-z8 A-Q8; 168ℓ.; [24], 312 leaves, illus. Title vignette (publisher's device); decorated initials. Leaves printed on both sides. Includes index. VERY SCARCE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-669. • Schütze, *Naturphilosophie*, c2000: [Edition C].

1048. 1551: Hieronymi Cardani Medici Mediolanensis De Subtilitate libri XXI. Ad illustriss. Principem Ferrandum Gonzagam, Mediolanensis provinciae Praefectum. Lugduni. Apud Gulielmum Rouillium sub scuto Veneto ... Lvgdvni, Apud G. Rouillium, 1551.

8°: †-††8 *-**8 a-z8 A-Q8 (Q8 blank); 343ℓ.; [64], 621, [1] p., illus, diags. Title vignette (printer's device). Includes index. COLOPHON: Lugduni, Excudebat Philbertvs Rolletivs. VERY SCARCE.

REFERENCES: Schütze, *Naturphilosophie*, c2000: [Edition D]. • Shaaber, *Sixteenth Century Imprints*, 1976: C-130.

1049. 1551: Hieronymi | Cardani Medi- | Ci Mediola- | Nensis, | De Svtilitate | Libri Xxi. | Ad illustriss. Principem Ferrandum Gon- | zagam, Mediolanensis provinciae | Praefectum. | Parisiis. | Ex officina Michaëlis Fezandat, et Roberti | Granion, in monte D. Hylarii sub Iuncis. | 1551.

8°: 312ℓ., illus.

RARE. Michel Fezandat & Robert Graion, publishers.

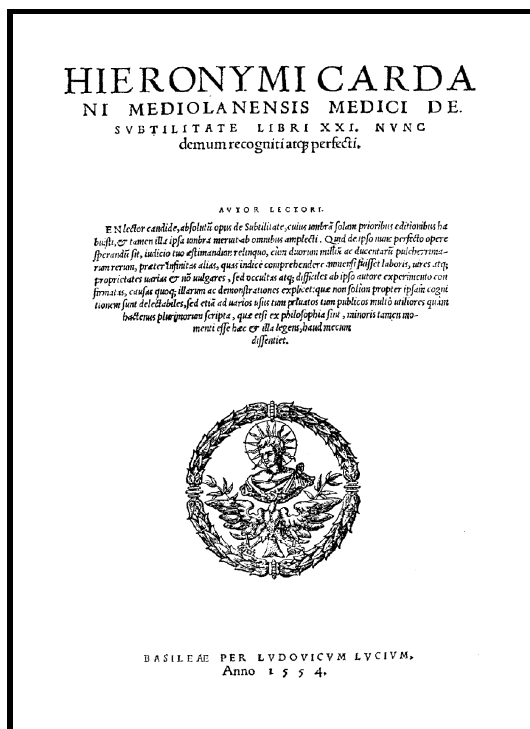
REFERENCES: Schütze, *Naturphilosophie*, c2000: [Edition E].

1050. 2nd edition, 1554: Hieronymi Cardani | Ni Mediolanensis Medici De | Svtilitate Libri XXI. Nvnc | demum recogniti atq; perfecti. | Avtor Lectori. | En lector candide, absolutū opus de Subtilitate, cuius sonbrā solam prioribus editionibus ha | busti, & lamen illa ipsa sonbr a meriat ab omiubus amplecti. Quid de ipso nunc perfecto opere | sperandū sit, iudicio tuo aestimandian relinquo, cum duorum milliū pulcherrima- | rian rerum, præter Infinites alias, quie indice comprehendere monensissasset laboris, uires stq; | proprietates uarias & nō uulgares, sed ovvultas atq; difficiles ab ipso autore experimento con | firmatas, causas quoq; illarum ac demonstrationes explicet: que non solum propter ipsam cogni | tionem sunt delectabiles, sed etiā ad uarios usus tum prluatos tiam publicos multo utiliores quā | hactenus plurimoriū scripta, quæ etsi ex philosophia sint, minoris tamen mo- | menti esse hæc & illa legens, haud mecum | diffentiet. | [ornament] | Basileæ Per Lvdivicvm Lvcivm, | Anno 1554.

2°: α-γ⁴ a-z⁴ A-Z⁴ Aa-Zz⁴ Aaa⁵; 293ℓ.; [24], 561, [1] p., portrait, illus., diags. Title page vignette.

RARE. Greatly enlarged and wholly rewritten edition and printed in a beautiful Roman type. It contains for the first time the celebrated proposition: *Igitur his arbitrio victoriæ relictis*, which caused Cardano's denouncement for heresy, and which was left out of the third original edition of 1560.

REFERENCES: Adams, *Cambridge Books*, 1967: C-670. • NUC: 95, 79-86 [NC 0128203]. • Schütze, *Naturphilosophie*, c2000: [Edition G]. • Wellcome Catalog (Books): 1, no. 1291.



DE SVBTILITATE LIBRI XXI, 1554

1051. 1554: Hieronymi Cardani Mediolanensis Medici, De subtilitate libri XXI. Nunc demum ab ipso autore recogniti atque perfecti ... Lugduni, Apud Gulielmum Rouillium., 1554.

8°: α-88 ε⁴ a-z⁸ A-Z⁸ Aa-Ee⁷; 449ℓ.; [72], 813, [2] p. Woodcut decorative border on t.p.; initials Includes index.

RARE. Reprint of the second edition of the same year. Guillaume Rouillé, 1518?-1589, printer.

REFERENCES: Adams, *Cambridge Books*, 1967: C-671. • NUC: [no copy listed]. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Schütze, *Naturphilosophie*, c2000: [Edition F]. • Shaaber, *Sixteenth Century Imprints*, 1976: C-131.

1052. 1559: Hieronymi Cardani Mediolanensis medici De svbtilitate libri XXI nunc demum ab ipso autore recogniti, atque perfecti. Lvgdvni, Apud Gulielmum Rouillium, 1559.

8°: a-z⁸ A-Y⁸ ★★★★★ (Y8 blank); 386ℓ.; 718, [54] p., illus. Printer's mark on t.p. Title vignette; headpiece, initials. Includes index. Errata: 1 p. (at end). VERY SCARCE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-672. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Schütze, *Naturphilosophie*, c2000: [Edition H]. • Wellcome Catalog (Books): 1, no. 1292.

1053. 1560: Hieronymi Car- | Dani Mediolanensis Medici | De Svbtilitate Libri Xxi. | Ab authore plusquam mille locis illustrati, nonnullis | etiam cum additionibus. | Addita insuper Apologia adversus calumniatorem, qua | uis horum librorum aperitur. | ... | Basileae. | Cum gratia et priuilegio Caesaræ | maiestatis.

2°: α-γ⁴ a-z⁴ A-Z⁴ Aa-Zz⁴ Aaa⁶ Bbb-Eee⁴ Fff⁶; 603 p., illus. Medallion portait of Cardano on t.p. Includes index. COLOPHON: Basileae, ex officina Petrina, anno M.D.LX. mense martio.

SCARCE. This edition contains Cardano's response to Julius Caesar Scaliger's attacks on this work. Sir Thomas Browne noted of Scaliger's criticisms, "If Cardan saith that a Parrot is a beautiful Bird, Scaliger will set his Wits o'work to prove it is a deformed Animal."

CARDANO

Also published in an octavo ed. with same imprint & colophon.

REFERENCES: Adams, *Cambridge Books*, 1967: C-673. • Schütze, *Naturphilosophie*, c2000: [Edition I].

1054. Octavo edition, 1560: Hieronymi | Cardani Medio- | lanensis medici de Subtili- | litate libri XXI. | Ab autore plusquam mille locis illustrati, | nonnullis etiam cum additio= | nibus. | Addita insuper Apologia adversus | calumniatorem, qua uis horum | librorum aperitur. | Basileae. | Cum gratia et priuilegio Caesariae Maiestatis.

8°: α -e⁸ ξ^4 A-Z⁸ a-z⁸ Aa-Zz⁸ aa-uu⁸ xx³; 759ℓ.; [88], 1426, [4] p., illus., diags., portait. Medallion portait of Cardano on verso of t.-p. Includes indices. COLOPHON: Basileae, ex officina Petrina, anno M.D.LX. mense mario.

VERY SCARCE. Among several inventions described and partly illustrated in this work are a telegraph and an alphabetical combination lock. Book XVI, "De scientiis," contains treatises on music, algebra, arithmetic and geometry. Third edition, in which the author retracts his famous statement (printed in the 2nd ed.), "Igitur his arbitrio victoriæ relictis," a remark that made his religious convictions suspect to the authorities of church and state. See Brunet V, 1573 which lists this edition.

"Hieronymi Cardani ... In calumniatorem librorum De subtilitate, actio prima ad Franciscum Abundium": p. 1265-1426 (the author's Apology)

Also published in a folio ed. with same imprint & colophon.

REFERENCES: Adams, *Cambridge Books*, 1967: C-674. • Schütze, *Naturphilosophie*, c2000: [Edition J]. • Wellcome Catalog (Books): 1, no. 1293.

1055. 1580: De Svbtilitate Libri XXI. Ab ipsa authoris recognitione, nunc demum emaculatiores & longe perfectiores reddit. Lugduni, Apud Stephanum Michaelum, 1580.

8°: a-z⁸ A-Y⁸ ★★*★ ★★*★ (Y8 blank); 386ℓ.; 718, [54] p., illus. PAGE SIZE: 170 x 102 mm. VERY SCARCE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-675. • Freilich Sale Catalog: no. 119. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Schütze, *Naturphilosophie*, c2000: [Edition K].

1056. Folio edition, 1582: Hieronymi | Cardani Medio- | Lanensis, Civisque Bono- | Nensis, Medici Clarissimi, | De Svbtilitate Libri XXI. | Iam Postremo, | Ab autore plus quam mille locis illustrati, nonnullis | etiam cum additionibus. | Addita insuper Apologia adversus calumniatorem, qua uis horum | librorum aperitur. | ... | Cum gratia et Priuilegio Caes. Maest. | Basileae. | Per Sebastianvm Hen- | ricpetri.

2°: α^4 - γ^4 a-z⁴ A-Z⁴ Aa-Zz⁴ 2Aa-Hh⁴ Ii⁶; 326ℓ.; [24], 626, [2] p., illus. Imprint date from colophon. Includes indexes. Medallion portait of Cardano on t.-p.; printer's mark on verso of last leaf. COLOPHON: Basileae, per Sebastianvm Henricpetri anno ... M.D.XXCII.

VERY SCARCE. Also published in an octavo ed. with same imprint & colophon.

REFERENCES: Schütze, *Naturphilosophie*, c2000: [Edition L].

1057. 1582: Hieronymi | Cardani Medio- | Lanensis, Civisqu'ue Bono= | Noenis, Medici Clarissimi, | De Svbtilitate Libri XXI. | Iam Postremo', | Ab autore plus quam mille locis illustrati, nonnullis | etiam cum additionibus. | Addita insuper Apologia aduersus calumniatorem, qua | uis horum librorum aperitur. | [Circular portrait of Cardano, dated 1553.] | Avthoris Carmen. | [...4 lines of prose...] | Cum Gratia & Priuilegio Caes. Maest. | Basileae, | Per Sebastianvm Hen= | ricpetri [sic].

4°: α - γ^4 a-z⁴ A-Z⁴ Aa-Zz⁴ AA-HH⁴ II⁶; 326ℓ.; [24], 626, [2] p., illus., portait on title page. COLOPHON: "Basiliæ, | Per Sebastianvm Hen= | ricpetrianno Salvtyis | Nostræ Instavratæ, | CIÖ. IO. XXCII." PAGE SIZE: 328 x 218 mm. VERY SCARCE.

Octavo issue: Adams, *Cambridge Books*, 1967, C-676, lists an octavo edition from the same publisher in the same year: pp. 1148. α -e⁸ A-Z⁸ Aa-Zz⁸ AA-ZZ⁸ AAa-CCc⁸.

REFERENCES: Adams, *Cambridge Books*, 1967: C-676. • Schütze, *Naturphilosophie*, c2000: [Edition M]. • Sinkankas, *Gemology Bibliography*, 1993: no. 1146. • VD16: C-936.

1058. 1611: Hieronymi Cardani Mediolanensis medici De subtilitate libri XXI: iam postremo, ab autore plusquam mille locis illustrati, nonnullis etiam cum additionibus. Addita insuper Apologia adversus calumniatorem, qua uis horum librorum aperitur. Basiliae, per Sebastianum Henricpetri, 1611.

8°: a⁸, β^8 , γ^8 , A⁸ E⁸, A-Z⁸, Aa-Zz⁸, AA-ZZ⁸, AAa-CCc⁸; 613ℓ.; [76], 1148, [2] p., illus., diags., portait. Printer's mark on t.-p. & verso of last leaf; medallion port. of Cardano on verso of t.-p. COLOPHON: Basileae, per Sebastianvm Henricpetri anno MDCXI. VERY SCARCE.

REFERENCES: NUC: [NC 0128211]. • Schütze, *Naturphilosophie*, c2000: [Edition N].

1059. 1664: Hieronymi Cardani | Mediolanensis Medici, | De | Subtilitate | Libri XXI. | Iam Antehac, | Ab Ipso Autore Plusquam | Mille Locis Illustrati, Nonnullis Etiam Cum Additionibus. Nunc iterum de novo correcti et hac Forma editi: Una cum Apologia Adversus Calumniatorem, Qua Vis Horum Librorum Aperitur. Basileae. Impensis Henric-Petrinorum, Anno M.DC.LXIV.

4°: [48], 816 p., portait, diags. Printer's mark on title-page. VERY SCARCE.

REFERENCES: Schütze, *Naturphilosophie*, c2000: [Edition P].

French editions

1060. 1556: Les | Livres De Hiero- | Me Cardanvs Medecin | Milanois, Intitules De | la Subtilité, et subtiles inuentions, | ensemble les causes occultes, et | raisons d'icelles, | Traduis de Latin en Francois, par | Richard le Blanc. | Avec Privilege Dv Roi. | A Paris, | Par Guillaume le Noir, rue S. Iaques à la | Rose blanche couronnée. | 1556.

4°: *4 A-4K⁴ (4K3 verso, 4K4 blank); ??ℓ.; [8] p., 393 (i.e., 383) numb.ℓ., [47] p., illus. (including diags.) Numbers 257-266 omitted in foliation. Printer's mark on t.-p. Also issued with imprints of Charles L'Angelier & of Jean Foucher.

SCARCE. The French translation of Cardano's *De Subtilitate* was undertaken by Richard Le Blanc [1510?-1574?] on behalf of his patron Marguerite de France, Duchesse de Berry, the sister of Henri II, to whom it is dedicated. Oddly, she did not finance the publication, this was done instead the speculative venture was financed by four publishers, who shared the high printing costs of this densely illustrated volume. It was probably produced in the standard print run of 1,200 copies, and protected by a ten-year privilege. This first printing seems to have sold well, which explains the renewed publication in 1566, using the same plates, and another decade for the reprinting of the 1578 edition. This reprinting seems not to have been as successful, because the sheets of the 1578 were reissued with a new title page in 1584.

REFERENCES: Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrasowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 323-4].

1061. 1566: Les livres de Hierosme Cardanvs ... intitulez de la subtilité, & subtiles inuentions, ensemble les causes occultes, & raisons d'icelles. Traduits de latin en françois, par Richard Le Blanc. Nouuellement reueus, corrigez, & augmentez sur le dernier exemplaire latin de l'auteur, & enrichy de plusieurs figures necessaires. Paris, G. Le Noir, 1566.

8°: [36], 478ℓ., illus.

SCARCE. Reissue of the text, using the same plates as those in the 1556 French edition.

REFERENCES: Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 323-4].

1062. 1578: Les livres ... intitulez De la subtilité & subtiles inventions, ensemble les causes occultes, & raisons d'icelles. Traduits de latin en françois, par Richard le Blanc. Nouvellement reveuz, corrigez, & augmentez sur le dernier exemplaire latin de l'auteur ... Paris, Simon Calvarin, 1578.

8°: ★⁴ à⁴ è⁸ ÿ⁸ ù⁸ a-z⁸ A-Z⁸ Aa-Oo⁷; 514ℓ.; [36], 478ℓ., illus.

SCARCE. Reissue of the text, using the same plates as those in the 1556 and 1566 French editions.

REFERENCES: Adams, *Cambridge Books*, 1967: C-677. • Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 323-4]. • Wellcome Catalog (Books): 1, no. 1294.

1063. 1584: Les livres de Hierosme Cardanvs ... intitulez de la subtilité, & subtiles inuentions, ensemble les causes occultes, & raisons d'icelles. Traduits de latin en françois, par Richard le Blanc. Nouvellement reveuz, corrigez & augmentez sur le dernier exemplaire latin de l'auteur, & enrichy de plusieurs figures necessaires. A Paris. Pour Pierre Cauelat ruë S. Iaques, à l'enseigne de l'escu de Florence. 1584.

4°: ★⁴ à⁴ è⁸ ÿ⁸ ù⁸ a-z⁸ A-Oo⁸ (Oo⁸ blank); ??ℓ.; [36]ℓ., 478 numb.ℓ., illus. (incl. diagrs.). Publisher's device on t.-p. Also issued with imprint of Jean Houzé.

SCARCE. Uses the same sheets as the 1578 edition with a new title page.

REFERENCES: Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 323-4]. • Shaaber, *Sixteenth Century Imprints*, 1976: C-132. • Wellcome Catalog (Books): 1, no. 1295.

German Editions

1064. Translation, First edition, 1559: Offenbarung der Natur vnnd Natürlicher Dingen auch Mancherley subtiler würckungen ... Darinn künstlich die Art vnd Eigenschafft desz gantzen Vmbkreys der Welt/ beyde Himmelscher vnd elementischer Spheren angezeigt werdend/ Auch der Cometen/ desz Gestirns/ Metallen/ Gesteinen/ vnnd einflussz würckungen, mitt sampt den pflantzen/ vnnd seltsamen arten der Beümen/ Thieren vnnd Menschen ... Alles durch Heinrich Pantaleon ... verteütschet.

4°: 26 p., 1ℓ., dccccxxxiij (i.e., 1,434), [2] p. Title page vignette (portrait). Printer's device on the verso of the last leaf. COLOPHON: Getruckt zu Basel durch Heinrich Petri im Mertzen Anno Domini M.D.Lix.

SCARCE. Apparently a combined translation of both of Cardano's chief works, *De Subtilitate* (1550), in an abridged text, and *De Rervm Varietate* (1557). The translation was provided by Heinrich Pantaleon [1522-1595], professor of medicine at Basel university, and dedicated to the bishop of Basel. This was done to ensure the publication of the work of an author who was persecuted by the church and hardly printed in Italy.

REFERENCES: Jensen, K., "Cardanus and his readers in the sixteenth century," (pp. 265-308) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 305-6]. • NUC: [NC 0128266]. • Wellcome Catalog (Books): 1, no. 1302.

1065. Translation, 2nd edition, 1591: Offenbarung der Natur vnd natürlicher Dingen, auch mancherley wunderbarlichen vnd subtilen Würckungen, durch den Hochgelehrten vnd weitberümpften Herren Hieronymum Cardanum, der Artzney Doctorn zu Meyland, in Latein beschrieben



OFFENBARUNG, 1559

... Jetzt newlich gemeinem Vatterlandt zu gutem in die verstandliche Teutsche zungen gebracht durch Hulderich Frölich von Plawen ... Basel Durch S. Henricpetri, [1591].

4°: [30], dccccxxviii (i.e., 1,328), [2] p. Title in red and black. Printer's mark on last page. COLOPHON: Getruckt zu Basel, durch Sebastianum Henricpetri, im Jar nach der gnadreichen Geburt Jesu Christi M.D.XCI.

SCARCE. Although the title claims this to be a new translation by Hulderich Frölich von Plawen, it is in fact only a minor revision of Pantaleon's translated text, published in 1559.

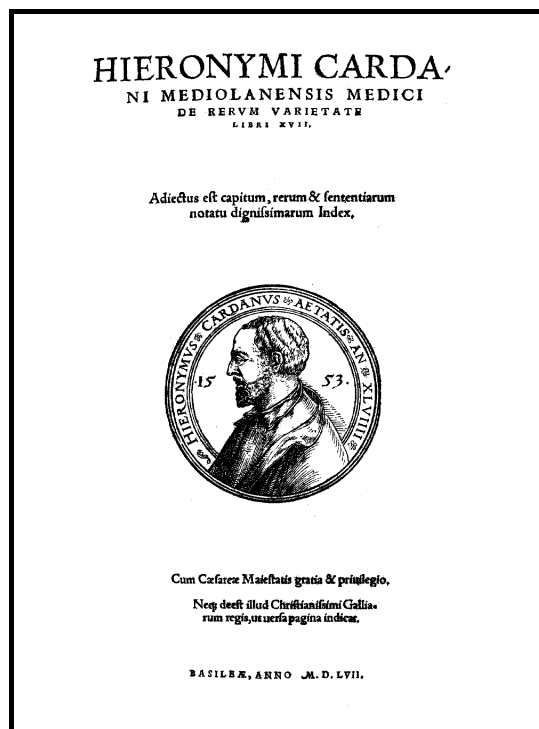
REFERENCES: Jensen, K., "Cardanus and his readers in the sixteenth century," (pp. 265-308) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p: [pp. 305-6]. • NUC: [NC 0128267]. • Wellcome Catalog (Books): 1, no. 1303.

De Rervm Varietate Libri XVII

1066. — Latin, 1557 [First edition, folio].

Hieronymi Carda- | ni Mediolanensis Medici | De Rervm Varietate | Libri XVII. | Adiectus est capitulum rerum & sententiarum | notatu dignissimarum Index. | [Circular portrait showing Cardano's head and shoulders and incorporating the date 1553.] | Cum Cæsareæ Maiestatis gratia & priuilegio. | Neq; deest illud Christianissimi Gallia= | rum regis, ut uersa pagina indicat. | Basileæ, Anno M.D.LVII.

2°: ★⁶ A-Z⁶ a-z⁶ aA-pP⁶ qQ⁴; 376ℓ.; [12], 707, [33] p., illus., diagrs. Portrait of the author (dated 1553)



DE RERVM VARIETATE LIBRI XVII, 1557

on the title page. PAGE SIZE: 313 x 200 mm.

CONTENTS: [1 pg], Title page.; [1 pg], "Privilegium Christianissimi | Galliarum Regis."; [8 pgs], Dedication.; [2 pgs], "Tabula Librorum XVIII." (=table of contents).; 1-690, Text.; 691-707, "Appendix."; [1 pg], Blank.; [31 pgs], "Rerum Ac Sententiarum Index Exactissimus."; [1 pg], Colophon: "[ornament] Basileae, Per | Henrichvm Petri, | Anno M.D.LVII."

RARE. The *De Rerum Varietate* [=The Diverse Facts] can be viewed as a supplement to the great encyclopedia, *De Subtilitate*. It was published by Henri Petri [see note below], who became Cardano's publisher in 1554. It contains materials which Cardano had gathered as supporting evidence to the ideas presented in the popular *De Subtilitate*, but because of space could not be included in its text. *De Rerum Varietate*, organized in 17 books, fleshes out the ideas about the natural, man-made and spiritual world presented in the 21 books of *De Subtilitate* with concrete and specific examples. Thus, the work forms a sequel to *De Subtilitate*, and, together with it, the 38 books contain Cardano's observations and ideas about many topics of nature, mankind and theology.

Henri Petri. (BORN: Nuremberg, Germany, ; DIED: 1579) *German publisher & printer.* Petri was the son of the Adam Petri [1454-1527], a successful printer in Nuremberg. He was a highly learned, shrewd and productive publisher, and it is reported that he visited the Frankfurt Book Fair more than a 100 times during his lifetime.

REFERENCES: Adams, *Cambridge Books*, 1967: C-662. • Dibner, *Heralds of Science*, 1955: 139. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 117. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 141-3. • Norman Catalog: no. 402. •

NUC: 95, 79-86 [NC 0128187]. • Personal communication: [Title page supplied by Patrick Watson and Bernard Quaritch, Ltd.]. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Shaaber, *Sixteenth Century Imprints*, 1976: C-127. • Wallerius, *Brevis Introductio*, 1779: 20. • Wellcome Catalog (Books): 1, no. 1297. • *Wheeler Catalogue*: 45. (Petri) ADB. • DBA: I 946, 41. • Hartmann, A. and B.R. Jenny, eds., *Die Amerbachkorrespondenz*, 7, Basel, 1973, pp. 177-82. [Provides details of Henri Petri's life and work.]. • Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p [p. 320]. • WBI.

1067. First edition, octavo, 1557: Hieronymi Cardani Medici De rerum varietate | te libri XVII. | Adiectus est capitulum rerum & sententiarum notatu dignissimarum Index. | Cum Cæsareæ Maiestatis gratia | & privilegio. | Neq̃ deest illud Christianissimi Galliarum regis, | ut uersa pagina indicat. | Basileae [Per | Henrichvm Petri] Anno | M. D. LVII.

8°: aa-bb⁸ A-Z⁸ a-z⁸ aa-ZZ⁸ AA-KK⁸; 650ℓ.; [30], [2 blank], 1,194 (i.e., 1,204), xiv p. Page numbers 769-770 & 791-792 omitted and 891-900 repeated in paging. Italic letter, circular woodcut portrait of the author on the verso of the title leaf, one full page woodcut, 2 folding woodcut diagrams, woodcut initials throughout volume. COLOPHON: Basileae, per Henrichvm Petri, anno M.D.LVII. VERY SCARCE.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 117. • NUC: 95, 79-86 [NC 0128185-8]. • Shaaber, *Sixteenth Century Imprints*, 1976: C-128. • Wellcome Catalog (Books): 1, no. 1298. • *Wheeler Catalogue*.

1068. Avignon edition, 1557: De Rerum Varietate Libri XVII. A Prima Editione ab ipso denuo Authore Recogniti, ac pluribus locis locupletati, infinitisque mendis repurgati. Avignono, Mathiahus Vincentius, 1557.

8°: [16], 883, [48] p., one folding table (at 568/9).

RARE. A pirated edition? Not listed in the standard bibliographies.

REFERENCES: Brunet: 1, 1573.

1069. 2nd edition, 1558: Hieronymi Cardani Mediolanensis medici De rerum varietate libri XVII. A prima editione ab ipso denuo authore recogniti, ac pluribus locis locupletati, infinitisque mendis repurgati. Accessit capitulum, rerum, ac sententiarum notatudignissimarum, index amplissimus. Avinione, per M. Vincentium, 1558.

8°: *⁸ a-z⁸ A-Z⁸ aa-Mm⁸ Nn² (*⁸ blank); 454ℓ.; [14], 883, [11] p., illus., folding table, diagrs.

VERY SCARCE. "The existence of a French privilege (owned not by Cardano, but by his publisher Petri) explains the publication in Avignon (not then under French jurisdiction) of *De Rerum Varietate* in 1558."—Maclean, p. 321.

REFERENCES: Adams, *Cambridge Books*, 1967: C-663.

• Beekman, *Systematische Mineralogie*, 1906: 24-25. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 141-43. • Maclean, I., "Cardano and his publishers 1534-1663," (pp. 309-338) in: Kessler, E., ed., *Girolamo Cardano, Philosoph, Naturforscher, Arzt*. Wiesbaden, Harrassowitz Verlag, 1994. [i]-xi, [1]-376 p [pp. 320-3]. • NUC: 95, 79-86 [NC 0128189]. • Roller & Goodman, *Catalogue*, 1976: 1, 204. • Wallerius, *Brevis Introductio*, 1779: 20. • Wellcome Catalog (Books): 1, no. 1300.

1070. 3rd edition, 1580: Hieronymi Cardani ... De rerum varietate libri XVII. Post alias omnes editiones, nunc recogniti, castigati, infinitisque mendis repurgati. Accessit capitulum, reum, ac sententiarum notatu dignissimarum, index amplissimus. Lugduni: Apud B. Honoratum, 1580.

8°: *⁸ a-z⁸ A-Z⁸ Aa-Mm⁸ Nn² (*⁸ blank); 453ℓ.; [14], 883, [48] p., illus., folding table, diagrs. VERY SCARCE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-664. • Beekman, *Systematische Mineralogie*, 1906: 24-25. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 141-43. • NUC: 95,

79-86 [NC 0128191]. • Wallerius, *Brevis Introductio*, 1779: 20.

1071. 4th edition, 1581: Hieronymi | Mi Cardani Me- | Diolanensis, Medici, | De Rerum Varietate, Li- | Bri XVII. Iam denuo ab in numeris | mendis summa cura ac studio repur- | gati, et pristino nito- | ri restituti. | Adiectvs Est Capitulum, Re- | rum et sententiarum notatu dignissima- | rum Index utilissimus. | Cum Gratia et Priuilegio. Caes. Maiest. | Basileae, | Per Sebastianvm | Henricpetri.

8^o: a-e⁸ A-Z⁸ Aa-Zz⁸ AA-ZZ⁸ AAa-CCc⁸ DDd¹⁰ (e8 blank); 615ℓ.; [80], 1,148, [1] p., illus., portrait, folding diagrs. Medallion portrait of Cardano on verso of title page. Cuts in text, distilling. experiments, etc. Printer's device on the title page. Historiated initials. COLOPHON: Basileae, per Sebastianvm Henricpetri, anno salvtis nostrae instauratae, CIO IO XXCI. Mense Septembri. VERY SCARCE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-666. • Beekman, *Systematische Mineralogie*, 1906: 24-25. • BM/STC German: 182. • Caillet, *Manuel*, 1912: 2017. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 141-43. • Ferguson, *Histories of Inventions*, 1981: 1, 23. • NUC: **95**, 79-86 [NC 0128192]. • Partington, *History of Chemistry*, 1961-70: **2**, 10. • Sinkankas, *Gemology Bibliography*, 1993: no. 1146. • VD16: C-21. • Wallerius, *Brevis Introductio*, 1779: 20.

De Gemmis et Coloribus Liber

1072. — Latin, 1562 [First edition].

Somniorvm | Synesiorvm Omnis Gene- | ris insomnia explicantes, Li- | bri IIII. | Per | Hieronymvm Carda- | Nvm Mediolanensem Me- | dicum ac Philosophum. | Qvibus Accedunt, Eivs- | dem haec etiam: | De Libris proprijs. | De Curationibus et Praedictionibus admirandis. | Neronis encomium. | Geometriae encomium. | De uno. | Actio in Thessalicum medicum. | De secretis. | De gemmis et coloribus. | Dialogus de Morte. | Dialogus de Humanis consiliis, Tetim inscriptus. | Item ad Somniorum libros pertinentia: | De minimis et propinquis. | De Summo bono. | Cum gratia et priuilegio. Caes. Maiest. | Basileae, | Per Hen- | Ricum Petri.

2 parts in one volume. [Part 1] 4^o: α-δ⁴ ε⁶ AA-ZZ⁴ AAa-MMm⁴ (ε6, MMm⁴ blank); 161ℓ.; [42], [2] blank, 278 p. [Part 2] 4^o: α-γ⁴ δ⁶ a-z⁴ A-Z⁴ aa-ff⁴; 225ℓ.; [36], 413, [1] p. Part 2, containing the De Libris Proprijs has a special title page.

RARE. This is Cardano's extensive treatise on sleep and dreams, the most important such interpretation of the 16th century. This work is designed as an explanation of the *De Somniis* by the famous neo-platonic philosopher Synesius of Cyrenne, and was based upon the writings of Artemidorus which he developed and elaborated. The second portion of the volume contains most of Cardano's other philosophical writings, including the chapters dealing with gemstones and color. The most important of these is the *De Libris Proprijs* in defense of all his doctrines which had been attacked on the ground of heterodoxy and magical leanings. The *Encomium Geometriae* and *De Secretis* deal with physics and alchemy. The *Dialogus de Morte* relates the death of an English boy whose education

was entrusted to Cardano who felt responsible for his death. There are other dissertations on astrology and a vindication of Emperor Nero. There are some shorter tracts of biobibliographical interest.

Contents: 1 Somniorum synesiorum. 2 De libris proprijs. 3 De curationibus et praedictionibus admirandis. 4 Neronis encomium. 5 Geometriae encomium. 6 De uno. 7 Actio in Thessalicum medicum. 8 De secretis. 9 De gemmis et coloribus. 10 Dialogus Guglielmus seu de morte. 11 Dialogus Tetim seu de humanis consiliis. 12 De minimis et propinquis. 13 De summo bono.

REFERENCES: Adams, *Cambridge Books*, 1967: C-692. • Browne, A., "Girolamo Cardano's Somniorum Synesiorum libri IIII," *Bibliothèque d'Humanisme et Renaissance*, **41** (1979), 123-35. • Caillet, *Manuel*, 1912: no. 2025. • Laehr, *Literatur der Psychiatrie*, 1900: **1**, 53, 83. • LKG: XVI 192. • NUC: **85**, 79-86 [NC 0128268 & 0128294]. • Wellcome Catalog (Books): **1**, no. 1305.

1073. Reissue, 1585: Somniorvm | Synesiorvm Omnis | Generis Insomnia Ex= | plicantes, Li | bri IIII. | Per | Hieronymvm Cardanvm | Mediolanensem Me- | dicum ac Philosophum. | Qvibus Accedunt, Eivs- | dem haec etiam: | De Libris proprijs. | De Curationibus et Praedictionibus admirandis. | Neronis encomium. | Geometriae encomium. | De uno. | Actio in Thessalicum medicum. | De Secretis. | De Gemmis et Coloribus. | Dialogus de Morte. | Dialogus de Humanis consiliis, Tetim inscriptus. | Item ad Somniorum libros pertinentia: | De minimis et propinquis. | De Summo bono. | Cum gratia et priuilegio. Caes. Maiest. | Basileae, | Per Sebastianvm | Henricpetri.

4^o: [Part 1] 4^o: α-δ⁴ ε⁶ AA-ZZ⁴ AAa-MMm⁴ (MMm⁴ blank); 161ℓ.; [42], [2] blank, 278 p. [Part 2] 4^o: α-γ⁴ δ⁶ a-z⁴ A-Z⁴ aa-ff⁴; 225ℓ.; [36], 413, [1] p. Part 2, containing the De Libris Proprijs has a special title page. RARE.

REFERENCES: Adams, *Cambridge Books*, 1967: C-693. • NUC: **95**, 79-86 [NC 0128296]. • Wellcome Catalog (Books): **1**, no. 1306.

1074. 1585: Hieronymi Cardani ... Oper quaedam Lectu ligna: nempe, De libris proprijs. De curationibus & praedictionibus admirandis. Neronis encomium. Geometriae encomium. De uno. Actio in Thessalicum medicum. De secretis. De gemmis & coloribus. Dialogus de morte. [Dialogue de] humanis consilijs, tetium inscriptus. De minimis & propinquis. De summo bono ... Basileae, Per Sebastianvm Henrich Petri [1585].

4^o: [35], 413, [2] p.

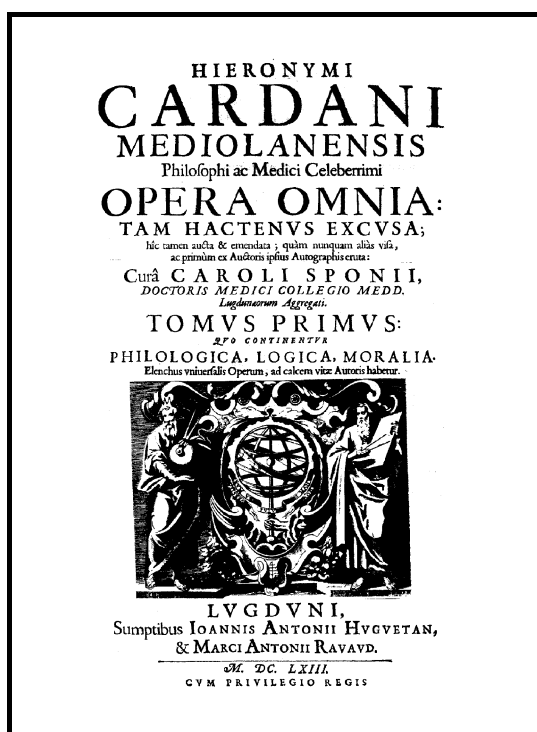
RARE. A collection of Cardano's philosophical writings, containing also in part two his essays on colors and gemstones.

REFERENCES: NUC: **95**, 79-86 [NC 0128369 & 0128298].

Opera Omnia

1075. — Latin, 1663 [Collected works].

Hieronymi | Cardani | Mediolanensis | Philosophi ac Medici Celeberrimi | Opera Omnia: | Tam Hactenus Excvsae; | hic tamen aucta & emendata; quàm nunquam aliàs visa, | ac primùm ex Auctoris ipsius Autographis eruta: | Curâ Caroli Sponii, | Doctoris Medici Collegio Medd. | Lugdunæorum Aggregati. | Tomvs Primvs: | Qvo Continentvr | Philologica, Logica, Moralia. | Elenchus vniuersalis Operum, ad calcem vitæ Autoris habetur. | [ornament] | Lvgdvni, | Sumptibus Ioannis Antonii Hvgvetan, | & Marci Antonii Ravavd. | [rule] | M. DC. LXIII. | Cvm Privilegio Regis.



OPERA OMNIA, 1663

10 vols. [VOL 1] 2°: ã4 ē4 ī4 ô4 ũ4 ãã4 A-OOo6 PpP3 (LL14 missed LL13); 387ℓ.; [48], 1-701, [25] p. [VOL 2] 2°: π2 A-SSs6 TTt3; 389ℓ.; [4], 1-736, [38] p. [VOL 3] 2°: π2 A-RRr6; 375ℓ.; [4], 1-713, [33] p. [VOL 4] 2°: ã4 A-DDd6 EEe-HHh4; 319ℓ.; [8], 1-630 p. [VOL 5] 2°: ã4 A-PPp6; 368ℓ.; [8], 1-728 p. [VOL 6] 2°: ã4 ē4 A-GGg6 HHH5; 470ℓ.; [16], 1-923, [1] p. [VOL 7] 2°: ã4 A-Ss6 Tt4 Vv5; 262ℓ.; [8], 1-515, [1] p. [VOL 8] 2°: π2 A-VVv6 XXx4 YYy3; 405ℓ.; [4], 1-806 p. [VOL 9] 2°: ã4 A-C6 D-Zzz4 AAaa3; 284ℓ.; [8], 1-570 p. [VOL 10] 2°: ã4 A-F6 G-BBbb4 CCcc5; 306ℓ.; [8], 1-585, [19] p.

CONTENTS: [VOL 1] ã1rv, Blank.; ã2r, Title page.; ã2v, Blank.; ã3r-ēv, "Gvilielmo | De Lamoignon, | Svpremi | Galliarvm Senatvs | Principi."; ē4r-ē4v, "Bibliopolarvm | Ad Lectorem Humanissimum | Præfatio."; ī1r-ō2v, "Vita Cardani | Ac | De Eodem | Ivdicivm. | Per Gabrielem Navdævm."; ō3r-ū2v, "Testimonia | Præcipva | De Cardano | A Gabriele Navdæo Collecta."; ũ3r-ū4v, Table of contents to all 10 volumes.; ãã1r-ãã4v, "Index | Librorum, Tractatum, & Capitum | Tomi Primi" [=detailed contents of volume 1, dated 17 April 1663]; pp. 1-701 (=A1r-NNn3r), Text.; NNn3v-PpP3v, "Index Rervm."

[VOL 2] π1r, Title page.; π1v, Blank.; π2r-π2v, "Index | Librorum, Tractatum, & Capitum | Tomi Secundi."; pp. 1-736 (=A1r-QQq2v), Text.; QQq3r-TTt3v, "Elenchvs | Rervm Et Verborvm, | Insignium quæ inhoc Secundo | Tomo habentur."

[VOL 3] π1r, Title page.; π1v, Blank.; π2r-π2v, "Index | Librorum, Tractatum, & Capitum | Tomi Tertij."; pp. 1-713 (=A1r-OOo2r), Text.; OOo2v-RRr6r, "Index | Rervm Et Verborvm, | Quæ continentur in Tertio Tomo."; RRr6v, Blank.

[VOL 4] ã1r, Title page.; ã1v, Blank.; ã2r-ã4r, "Index | Librorum, Tractatum, & Captivm | Tomi Quarti."; ã4v, Blank.; pp. 1-630 (=A1r-HHh3v), Text.

[VOL 5] ã1r, Title page.; ã1v, Blank.; ã2r-ã4v, "Index | Librorum, Tractatum, & Captivm | Tomi Quinti."; pp. 1-728 (=A1r-PPp6v), Text.

[VOL 6] ã1r, Title page.; ã1v, Blank.; ã2r-ē4v, "Index | Librorum, Tractatum, & Captivm | Tomi Sexti."; pp. 1-923 (=A1r-HHh5r), Text.; HHh5v, Blank.

[VOL 7] ã1r, Title page.; ã1v, Blank.; ã2r-ã4v, "Index | Librorum, Tractatum, & Captivm | Tomi VII."; pp. 1-515 (=A1r-Vv5r), Text.; Vv5v, Blank.

[VOL 8] π1r, Title page.; π1v, Blank.; π2r-π2v, "Index | Librorum, Tractatum, & Captivm | Tomi Octavi."; pp. 1-806 (=A1r-YYy3v), Text.

[VOL 9] ã1r, Title page.; ã1v, Blank.; ã2r-ã4v, "Index | Librorum, Tractatum, & Captivm | Tomi Noni."; pp. 1-570 (=A1r-AAaa3v), Text.

[VOL 10] ã1r, Title page.; ã1v, Blank.; ã2r-ã4v, "Index | Librorum, Tractatum, & Captivm | Tomi Decimi."; pp. 1-585 (=A1r-BBbb1r), Text.; BBbb1v-CCcc5v, "Index | Rerum Memorabilium quæ inhoc | Decimo Tomo continentvr."

VERY SCARCE. These are the collected writings of Cardano who was a voluminous author on a wide range of subjects. His works were collected together and published by Charles Spon [1609-1684], a French physician of German origin, in these ten large folio volumes, containing 138 treatises divided by the editor into philological, logical, moral, physical, mathematical, musical, astronomical, astrological, onirocritical, medical and fragments.

Facsimile reprint, 1967: New York, Johnson Reprint, 1967, with an introduction by August Buck [1911-] to be found in the first volume.

REFERENCES: NUC: 95, 79-86. • Partington, *History of Chemistry*, 1961-70: 2, 10. • Roller & Goodman, *Catalogue*, 1976: 1, 204.

CARDANUS, Hieronymus.

See: Cardano, Girolamo.

CAROSI, Jan Filip von. (BORN: Rom, Poland, 1744; DIED: Mogila near Krakow, Poland, 1801) *Polish geologist & mining expert*.

Carosi was supervisor and mining director in Warschau. He wrote about his travels through the Polish territories.

REFERENCES: Orgelbranda, *Encyklopedia Powszechna*, 1898-1912: 3, 321-2. • PBA: *Polskie Archiwum Biograficzne*: 39, 349-353; S27, 76-78. • Poggendorff: 1, col. 382. • *Polski Słownik Biograficzny*: 3, 206-7 [by N. Gąsiorowska]. • Różiewicz, J., "Listy Jany Filipa Carosiego [1744-1799] do Cesarskiej Akademii Nauk w Petersburgu," (Jan Filip Carosi's letters to the Imperial Academy of Sciences in St. Petersburg.), *Stud. Mater. Dziej. Nauk. Pol.*, Ser. C, 21 (1976), 5-40. • Sarjeant, *Geologists*, 1980: 2, 691-2. • Siemion, I.Z., "Jan Filip Carosi (1744-1801?): Szkic biograficzny," *Kwartalnik Historii Nauki i Techniki*, 19 (1974), 495-508. • Waga, A., "O Janie Filipie Karozym (de Carosi) i Karolu Pertesie (de Perthées), dwóch naturalistach polskich pod Stanisławem Augustem," *Bibl. Warsz.*, Series 3, 4 (1843), 193-210. • WBI.

1076. — French, 1777.

Essai | d'une | Lithographie | de | Mloćin. | [double rule] | Écrit | à Varsovie en 1777. | [ornament] | [ornate rule] | Imprimé à Dresde, MDCCCLXXVII.

8°: 96 p.

RARE. A topographical essay on the lithology and mineralogy in the region near Mloćin in northeast Poland.

REFERENCES: BL: [B.405.(4.)]. • LKG: XIV 724. • NUC: 96, 209. • Ward & Carozzi, *Geology Emerging*, 1984: no. 425.

1077. — German, 1779.

Beyträge | zur | Naturgeschichte | der | Niederlausitz, | insbesondere aber | des Mineralreichs derselben | von | Johann Philipp von Carosi. | [ornament] | Mit Kupfern. | [ornate rule] | Leipzig, | verlegt Johann Gottlob Immanuel Breitkopf, | 1779.

8°: 68 p., plates.

RARE. A topographical examination of the natural history near Lusatia in what was then western Poland, but is now located in Germany. Carosi concentrates on the mineral resources of the area, especially its mines and quarries, as well as the products produced.

REFERENCES: BL: [T.961.(2.)]. • LKG: XIV 136.

1078. — German, 1781-4.

Johann Philipp von Carosi's | [...3 lines of titles and memberships...] | Reisen | durch verschiedene | polnische Provinzen, | mineralischen und andern Inhalts. | [rule] | Erster Theil. | [vignette] | Mit sechs Kupfertafeln. | [ornate rule] | Leipzig, Verlegt Johann Gottlob Immanuel Breitkopf, 1781 [-1784].

2 parts. [Part 1: 1781] 8°: 264 p., 6 plates. [Part 2: 1784] 8°: 298 p., illus.

VERY SCARCE. In his capacity as general manager of mines, Carosi carried out between 1778-1780 an exploration of the Southwest regions of Poland. He published the results of this, his most important work in two volumes, *Reisen durch verschiedene polnische Provinzen mineralischen und anderen Inhalts* (Leipzig 1781-1784). One of the goals of this expedition was to locate a source or sources for mining salt. The saltworks of Wieliczka and Bochnia had been lost to Austria and the state required a new saltworks which could replace it. Carosi also provides invaluable information on the copper, iron, and black lead deposits that he had visited. He also gives some information on mines of the adjacent regions of Kielce and Chęciny. Carosi also gives a lists of minerals collected, which he thoroughly describes according to the "method of Werner".

REFERENCES: BL: [281.k.6.]. • LKG: XIV 725a. • NUC: 96, 209.

1079. — French, 1783.

Sur La | Génération | Du | Silex et du Quarz | en partie. | Observations Faites | En | Pologne | Par | J.P. de Carosi | C.a.s.d.R. et. d.l.R.d.P.&c. | [ornament] | 1783. | [rule] | à Cracovie Chez Ignace Grebel. | & s trpive à Vienne, chz de Tratnern, à Leiptzig [|] | chez Beitkopf, à Breslau chez Wilh. Korn.

8°: [16], 94, [2] p., title vignette, head-piece.

RARE. Carosi gives his observations on the formation of flint and quartz in this work published in

Vienna in 1783, in French.

REFERENCES: BL: [B.241.(3.)]. • LKG: XVI 374. • NUC: 96, 209. • Sinkankas, *Gemology Bibliography*, 1993: no. 1152 [not seen]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 426.

1080. German transl., 1783: Ueber die | Erzeugung | des | Kiesels und des Qwarzes | zum Teil | beobachtet | in Polen | durch | J.P. von Carosi | Königl. Polnischen Hauptmann. | [rule] | Aus dem Französischen übersezt durch den Verfasser. | Mit zwei Kupfern. | [rule] | Leipzig, in der Joh. Gotfr. Müllerschen Buchhandlung. | 1783.

8°: 80 p., 2 plates.

RARE. Carosi prepared this German translation of his *Sur la Génération du Silex et du Quarz* (1783), which was distributed by the same publisher.

REFERENCES: BL: [726.d.13.]. • LKG: XVI 375a. • NUC: 96, 209.

CARRILLO LASSO, Alonso. (BORN: c1582; DIED: Córdoba, Spain?, 1628) *Spanish lawyer.*

Little is known of Laso, other than he was born the son of an illustrious lawyer and writer, Don Fernando.

REFERENCES: ABE: III 136, 119-120. • López Piñero, *Diccionario Histórico*, 1983: p. 115. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: 1, 132-3. • WBI.

1081. — Latin, 1624 [First edition].

De Las Antiquas | Minas De España. | Avtor Don Alonso Carrillo | Lasso, del Abito de Sanctiago, Cauallerizo de Cordona. | Alserenissimo Infante D. Carlos. | [Large rectangular ornament showing a royal crest] | Con licentia, en Cordoua, Por Saluador de Cça, A. 1624.

4°: 54 p.

VERY RARE. Carrillo Lasso's work is a history of Spanish mining practice, including information on the mines in the New World. This first edition of 1624 is thought to be the first book in the Spanish language on mining. It was reprinted and appended to the 1729 edition of ALVARO ALONSO BARBA's *Arte de los Metales*.

REFERENCES: Calvo Rebollar, *Bibliografía Mineralogía Españolas*, 1999: p. 66-68. • *La imprenta en Córdoba: Ensayo bibliográfico*. Madrid, 1900. 721 p: [no. 119]. • LKG: XIV 816. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: no. ?? . • Palau, *Manual*, 1948-77: no. 45584.

CARTHEUSER, Friedrich August. (BORN: Halle, Germany, 1734; DIED: Schierstein, Germany, 12 December 1796) *German geologist & mineralogist.*

Son of the German physician and apothecary, Johann Freidrich Cartheuser [1704-1777], Friedrich August was trained in the medical profession, but devoted himself to natural history and especially mineralogy and geology. Between 1754-66, he was a Docent in mineralogy, botany and chemistry at the University of Frankfurt an der Oder. Then he was named professor of natural studies at the University of Giessen. He became an advisor on mining and geological matters to the government.

REFERENCES: ADB. • Baur, *Allgemeines historisches Handwörterbuch*, 1803. • DBA: I 181, 326-351; II 217, 335. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 75. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: I, col. 385. • WBI.

1082. — Latin, 1755.

Elementa | Mineralogiae | Systematice Disposita | A | Friederico Augusto | Cartheuser | Med.

CARYOPHILI

Doct. | [ornament] | [ornate rule] | Francofurti | Ad Viadrum. | Impensis Pauli Sigismundi Gaebler, | An. c1515C LV.

8°: [16], 104 p.

RARE. This work describes the basis of Cartheuser's system of classification in mineralogy. It was innovative for its time in separating the petrifications and figured stones into a separate class of object away from true minerals. The system described contained the seven principle divisions of (1) Terræ, which separated those substances that could be dissolved in water and those that could not, (2) Lapides, (3) Salia, including alkali and acid, (4) Inflammabilia, (5) Semimetalla, (6) Metalla, and (7) Heteromorpha, containing petrifications, fossils and figured stones.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 36. • BL: [B.252.(1.)]. • BMC: 1, 321. • *Comm. Scientia Natur.*: 4, 545. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 146. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 27. • Kobell, *Geschichte der Mineralogie*, 1864: p. 156. • LKG: XII 47. • NUC: 97, 242-3. • Schröter's *Journal für die Liebhaber*: 2, 47. • Vogel's *Neue Medicinische Bibliothek*: 2, 349. • Wallerius, *Brevis Introductio*, 1779: 84.

1083. — Latin, 1755.

Friederici Avgvsti Carthevser, | [...3 lines of titles and memberships...] | Rvdimenta | Oryctographiae | Viadrino- | Francofvrtanae. | [ornament] | [rule] | Francofvrti Ad Viadrvm, | apvd Iohannem Christianvm Kleyb. | 1755.

8°: [12], 78, [6] p.

RARE. *Rvdimenta Oryctographiæ Viadrino – Francofvrtanae* presents an account of the minerals to be found in the area surrounding Frankfurt-an-der-Oder in Germany. The author was an avid mineralogist, and spent much time wondering the district in search of mineralogical wonders, which he describes within this volume.

REFERENCES: BL: [953.a.17.(4.)]. • LKG: XIV 195.

1084. — German, 1771-3.

Mineralogische | Abhandlungen | [rule] | Von | Friedrich August Cartheuser, | Hochfürstl. Hessischen Bergrath und Professor | zu Giessen. | [vignette] | Giessen, | bei Johann Philipp Krieger, Universitäts=Buchhändler | 1771.

2 parts. [Part 1: 1771] 8°: [4], [1]-243, [1] p. [Part 2: 1773] 8°: 120 p. PAGE SIZE: 170 x 96 mm.

CONTENTS: [Part 1] [2 pgs], Title page, verso blank; [2 pgs], "Vorrede."—signed Friedrich August Cartheuser, 26 August 1771; [1]-243, Text; [1 pg], "Inhalt." [Part 2] No copy examined.

VERY SCARCE. Cartheuser's *Mineralogische Abhandlungen* presents his ideas on mineralogical science. The work was intended as a textbook for an advanced level class in the study, and gives many philosophical arguments as to the nature of minerals in general.

Contents: I. Vom Traß (pp. 1-53). II. Von den Bestandtheilen der gypsartigen Steine und Erden (pp. 54-88). III. Von dem Gestein, welches die Dornen der Gradirhäuser überzieht (pp. 89-101). IV. Einige



MINERALOGISCHE ABHANDLUNGEN, 1771

Anmerkungen vom Arsenic (pp. 102-127). V. Vom Bimstein (pp. 128-150). VI. Von den Bestandtheilen des Thons (pp. 151-219). VII. Von der Alaunerde (pp. 220-243).

REFERENCES: *Allgemeine Deutsche Bibliothek*: 21, 574 ["Sehr gut und lehrreiche"]. • BL: [990.c.20.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 285. • LKG: VI 50. • NUC: 97, 242-3. • Sinkankas, *Gemology Bibliography*, 1993: no. 1159. • Ward & Carozzi, *Geology Emerging*, 1984: no. 427.

1085. *Dissertation*, 1777: Facultatis Medicae Decanus D. F. A. Cartheuser ... Ioannis Ludovici Christiani Schmidt ... sollemnia inauguralia indicit, simulque de quibusdam vinorum adulterationibus sanitati noxiis quae additamentis mineralibus peraguntur breviter disserit. [Gissae Hassorum] Typis Joan. Jacobi Braunii [1777].

4°: A-B⁴; 8l.; [1]-16 p.

RARE. A program dissertation, which besides some minor mineralogical interest, includes a life of Georgius Bartramus Timmermann [1745-].

REFERENCES: BL: [7306.f.11.(24.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9.

CARYOPHILI, Blasii.

See: Garofalo, Biagio.

CASTRILLO, Fernando. (BORN: Cadix, Spain, 1586; DIED: Ossuna, Spain(?), 21 November 1667) *Spanish Jesuit & botanist.*

Castrillo [or Hernando Castrillón] was a member of the Campaign of 1602, becoming a professor of theology at the University in Cazorla.

REFERENCES: ABE: I 197, 417; 197, 442-443; III 147, 175-176. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Sommervogel, *Bibliothèque Compagnie de Jesus*, 1890: 2, 855. • WBI.

1086. — Spanish, 1649.

Magia Natural, | O Ciencia De | Filosofia Ocvlta,
| Con Nvevas Noticias De | los mas profundos
misterios y secretor | del uniuersa visible. | Por El
P. Hernando Castrillo, | de la Companña de Iesvs,
natural | de Cadiz. | Primera Parte, | Donde se
trata de los secretos que pertenecen a las | partes de
la Tierra. | Año [ornament] 1649. | Con Privilegio. |
Impresso en Trigueros, por Diego Perez Estupiñan.
4°: 224ℓ.

VERY RARE. Castrillo, a Jesuit, first wrote this work in 1636. He discusses astrology, physiognomy, and natural magic. He adds a section on earthly questions—the location of the terrestrial paradise, whether there are springs on the highest mountains, herbs, metals, and stones, and other natural phenomena. “It would appear that there is more nature than magic in Castrillo’s book ... But he might answer that natural magic is more concerned with nature than other sciences are” (Thorndike).

REFERENCES: BL: [719.f.14.]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 149. • Maffei & Rua Figuera, *Bibliografía Mineral*, 1871-2: no. 437. • Picatoste, *Biblioteca Científica Española*, 1891. • Thorndike, *History of Magic*, 1923-58: 7, p. 333-5.

1087. 2nd edition, 1692: [Contained within an ornamental box:] Historia | Y | Magica Natural, | O Ciencia De
Filosophia | Ocvlta, Con Nvevas Noticias De | los mas
profundos misterios, secretos del | Vniverso visible, en que
se trata de anima- | les, pezes, aves, plantas, flores, yervas,
| metales, piedras, aguas, semillas, | Parayso, montes y |
Valles. | Por El Padre Hernando Castrillo | de la Compañia
de Jesvs, natural de Cadiz. | Donde Trata De Los Secretos
| que pertenecen à las partes dela tierra. | Con Licencia. |
[rule] | En Madrid: Por Jvan Garcia Infanzon. Año 1692. |
Acosta de Francisco-Sazedon, Mercader de librosi Vendese
en sir ca- | sa en la calle de Atocha Junto à la Santissima
Teinidad frente | de la casa de los Fucares.

8°: [14], 342, [16] p. RARE.

REFERENCES: BL: [8630.g.14.]. • Palau, *Manual*, 1948-77: no. 48514. • Sabin, *Dictionary*, 1868-1936: no. ?? [pages 104-8 are on America]. • Sommervogel, *Bibliothèque Compagnie de Jesus*, 1890: 2, 855. • Thorndike, *History of Magic*, 1923-58: 7, 334.

1088. 3rd edition, 1723: Magia Natural, o Ciencia de filosofia
oculta ... Primera parte, donde se trata de los secretos que
pertenecen a las partes de la tierra. ... Madrid, Juan Sanz,
1723.

8°: RARE.

REFERENCES: NUC.

CATALOGI.**1089. — Latin, 1740.**

Catalogi lapidum Veronensium mantissa. Veronæ,
1740.

4°: 12 p., 4 plates. In the British Library copy the
two leaves containing pp. 9-12 are in duplicate. RARE.

REFERENCES: BL: [661.f.19.(4.)].

CATALOGUE.**1090. — English, 1815.**

A Catalogue of minerals, describing their general
characters, for the use of learners, intended to

accompany small collections. [London, Barnard &
Farley] 1815.

12°: iv, 83 p. VERY SCARCE.

1091. — English, 1823 [Sale catalog].

Catalogue of books to be sold at auction, on
Thursday, the 13th day of February 1823, at 10
o'clock, A.M. in Joy’s Buildings, Cornhill Square,
Boston containing a choice collection of works upon
botany and natural history, and comprising the
whole library of the late William D. Peck, professor
of botany and natural history in the University of
Cambridge, also an extensive collection of minerals,
coins, and insects, in the finest order. [Cambridge,
Hilliard and Metcalf], 1823.

8°: 27 p.

VERY SCARCE. Sale catalogue of William
Dandridge Peck’s [1763-1822] belongings including a
collection of minerals.

1092. — French, 1860 [Collection catalog].

Catalogue, ou État détaillé et descriptif de la
collection de produits minéraux et de fossiles
recueillis dans les Htes-Pyrénées par M. J. Davezac
... Ledit catalogue dressé par lui-même ... Le tout
fait avec l’assistance, la rédaction et une notice
préliminaire de M. Benjamin Vignerte. Bagnères,
[1860?].

8°: viii, 36 p.

VERY SCARCE. DAVEZAC. Jean and VIGNERTE.
Benjamin

REFERENCES: BL: [7106.f.4.(5.)].

1093. — English, 1889.

Catalogue of the minerals and woods of the
regions of the states of Virginia, North and South
Carolina, and Georgia, traversed by the lines of
the Richmond and Danville Railroad Company,
displayed in its exhibits ... Richmond, Baughman
Bros., 1889.

8°: ii, 34 p. VERY SCARCE.

CATALOGUE.**1094. — French, 1780** [Sale catalog].

Catalogue d’une belle Collection de Coquilles,
Moules, Échines, Curiosités-Naturelles, Minéraux,
Végétaux, Production de l’Art et autres, comme
aussi d’une Collection de livres y relatifs & sur
d’autres sujets, qui se vendront Lundi 31. Juillet
1780. & jours suivant...dans l’Hôtel des Justices
françoises de Berlin ... Berlin, Printed by C.S.
Spener, 1780.

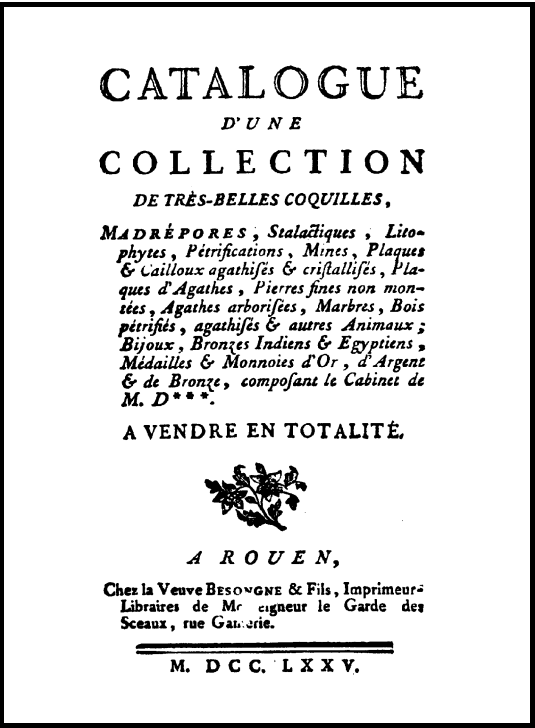
8°: [2], 115 (i.e., 118) p.

RARE. An interesting and rare catalogue. Along
with the natural history specimens, also sold are 35

CATALOGUE D'UNE COLLECTION

scientific instruments, 42 medals, and 507 lots of books, including many important natural history titles.

REFERENCES: BL. • Jonathan Hill, Bookseller: cat. 133 (2000), no. 5. • NUC: [no copy listed].



CATALOGUE, 1775

CATALOGUE D'UNE COLLECTION.

1095. — French, 1775 [Sale catalog].

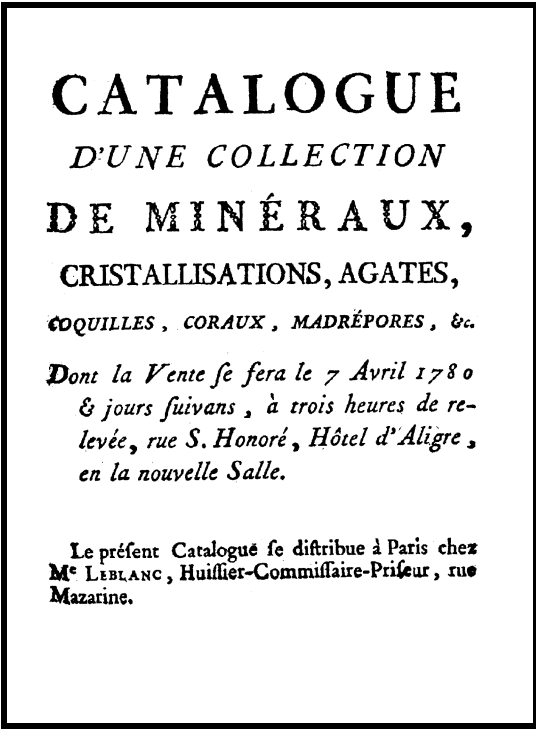
Catalogue | D'une | Collection | De Très-Belles Coquilles. | Madrépores, Stalactiques, Lito- | phytes, Pétrifications, Mines, Plaques | & Cailloux agathisés & cristallisés, Pla- | ques d'Agathes, Pierres fines non mon- | téés, Agathes arborisées, Marbres, Bois | pétrifiés, agathisés & autres Animaux; | Bijoux, Bronzes Indiens & Egyptiens, | Médailles & Monnoies d'Or, d'Argent | & de Bronze, composant le Cabinet de | M. D***. | A Vendre En Totalité. | [ornament] | A Rouen, | Chez la Veuve Besongne & Fils, Imprimeur- | Libraires de Monseigneur le Garde des | Sceaux, rue Ganterie. | [double rule] | M. DCC. LXXV.

8°: [1]-55, [1] p.

RARE. A sale catalog describing a rich collection of natural history and manmade objects. Included in the selections are preserved specimens of fish, reptiles and small animals, a large selection of shells, fossils, agates, stalactites, crystallizations, various examples of decorative marble, bronzes from India and Egypt,

weapons, etc. Although the title only attributes the collection to a M. D***, Dezallier d'Argenville in a contemporary list of the shell collectors published in his *Conchyliologie*, 3rd édition (Paris, 1767, p. 321), lists in the town of Rouen a collector by the name of De La Fosse, and there is some indication that this is the sale catalog of his collection.

REFERENCES: *Cabinets de Curiosités*: no. 106. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: p. 709.



CATALOGUE, 1780

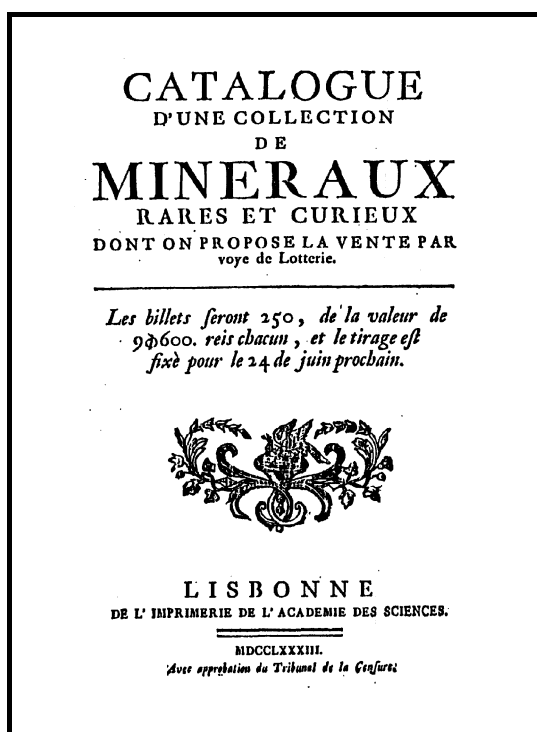
1096. — French, 1780 [Sale catalog].

Catalogue | D'Une Collection | De Minéraux, | Cristallisations, Agates, | Coquilles, Coraux, Madrépores, &c. | Dont la Vente se fera le 7 Avril 1780 | & jours suivans, à trois heures de re- | levée, rue | S. Honoré, Hôtel d'Aligre, | en la nouvelle Salle. | Le présent Catalogue se distribue à Paris chez | M^e Leblanc, Huissier-Commissaire-Preneur, rue | Mazarine.

8°: π^1 A-B⁸ C³; 20*l.*; [2], [1]-38 p. PAGE SIZE: 194 x 120 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-38, Text.

RARE. Auction sale catalog listing 290 lots containing minerals, cristallizations, agates, shells, corals, and madrepores. The catalog was anonymously compiled. The sale took place on April 7th, 1780 at the Hôtel d'Aligre in Paris.



CATALOGUE, 1783 (LOTTERY)

1097. — French, 1783 [Lottery sale catalog].

Catalogue | D'Une Collection | De | Mineraux | Rares Et Curieux | Dont On Propose LA Vente Par | voye de Lotterie. | [rule] | Les billets seront 250, de la valeur de | 90600. reis chacun, et le tirage est | fixé pour le 24 de juin prochain. | [ornament] | Lisbonne | De L'Imprimerie De L'Academie Des Sciences. | [double rule] | MDCCLXXXIII. | Avec approbation du Tribunal de la Censure.

8°:

VERY RARE. Mineral sale by lottery, published in Lisbon, Portugal.

CATALOGUS LAPIDUM.**1098. — Latin, 1677** [Collection catalog].

Catalogus lapidum pretiosorum, achatum, onycum ... Nec non numismatum græcorum, romanorum ... maxima impensa congestorum. Amstelodami, 1677.

12°: 197 p. VERY RARE.

REFERENCES: BL: [603.a.36.(1.)].

1099. Another edition, 1688: Catalogus lapidum pretiosorum, achatum, onycum ... Nec non numismata [sic] græcorum, romanorum ... maxima impensa congestorum. Amstelodami, J. de Wees, 1688.

12°: 197 p. RARE.

REFERENCES: BL: [603.a.36.(2.)].



CATULLO

CATULLO, Tommaso Antonio. (BORN: Belluno, Italy, July 9 1782; DIED: Padua, Italy, 13 April 1869) *Italian physician, naturalist & mineralogist.*

Trained in the medical profession, Catullo was appointed in 1811 an instructor of natural history and chemistry at Belluno, followed in 1815 at Verona and in 1822 at Venice. Soon thereafter, he was appointed a professor in the same subjects at the University of Padua. He held membership in the Società Italiana.

REFERENCES: ABI: I 275, 217-228. • Caillaux, A., "Notice sur la vie et les travaux de M. Catullo," *Bulletin de la Société Géologique de France*, series 2, **27** (1869-70), 539-44. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • De Zigno, A., "Commemorazione del Prof. Cav. Tommaso Antonio Catullo," *Atti Ist. Veneto*, series 3, **15** (1870), 3-17. • *Dizionario Biografico Italiani*: **22**, 531-3. • Keller, A., *Tommaso Catullo*. Padua, Tipografia Prosperini, 1869. 16 p. • Lambrecht & Quenstedt, *Catalogus*, 1938: 76. • Morello, N., "Problemi paleontologici nella geologia veneta dei primi decenni dell'Ottocento," (pp. 11-22) in: *Le scienze della Terra nel Veneto dell'Ottocento*. • Poggendorff: **1**, col. 398 & **3**, 247. • *Prospetti degli scritti pubblicati da Tommaso Antonio Catullo. Professore emerito di Storia Naturale nell'I.R. Università di Padova, compilato da un suo amico e discepolo*. Padua, 1857. 284 p. [BL 7006.dd.4.]. • Sarjeant, *Geologists*, 1980: **2**, 704. • *Verhandlungen Geologischen Reichsanstalt*, Wien: 1869, 130-1. • WBI.

1100. — Italian, 1812.

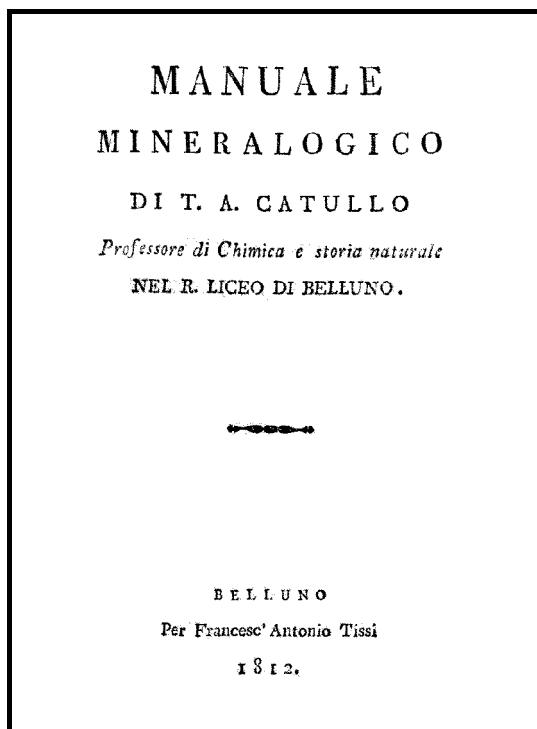
Manuale | Mineralogico | Di T.A. Catullo | Professore di Chimica e storia naturale | Nel R. Liceo Di Belluno. | [ornate rule] | Belluno | Per Francesc' Antonio Tissi | 1812.

12°: [1]-14¹² 15¹⁰; 179ℓ.; [8], ii, [1]-348 p.

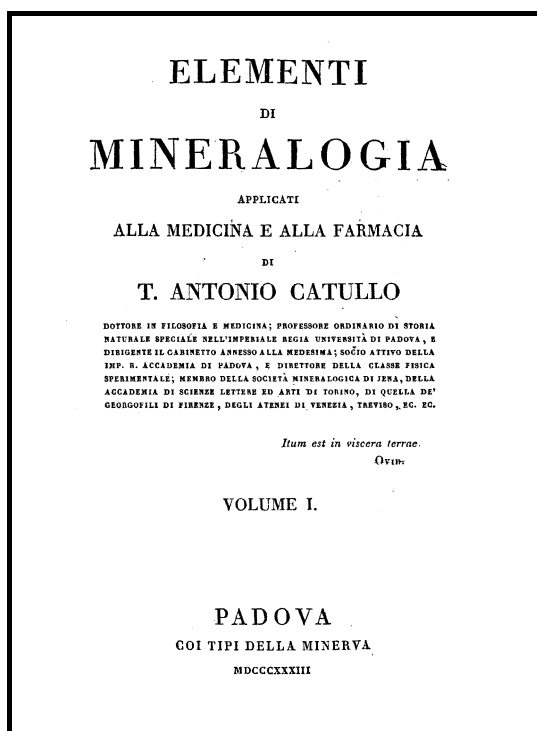
RARE. In this high school level textbook, Catullo has provided an introduction to mineralogical science and a detailed classification system with extensive descriptive notes about each species' characteristics (specific gravity, hardness, chemical analysis, varieties, locations of deposits, electrical conductivity, etc.).

REFERENCES: *Biblioteca Civica di Belluno, Italy*: St. 186 [supplied a title page facsimile]. • BMC: **1**, 327. • Personal communication: [Renato and Adriana Pagano].

1101. — Italian, 1833.



MANUALE MINERALOGICO, 1812



ELEMENTI DI MINERALOGIA, 1833

Elementi | Di | Mineralogia | Applicati | Alla
Medicina E Alla Farmacia | Di | T. Antonio
Catullo | [...7 lines of titles and memberships...] |
Itum est in viscera terrae. | Ovid. | Volume
I [-II]. | Padova | Coi Tipi Della Minerva |
MDCCCXXXIII.

2 vols. [VOL 1] 8°: [1]-272 p., 2 plates (folding;
crystals and apparatus). [VOL 2] 8°: [273]-512 p. PAGE
SIZE: 230 x 145 mm. uncut.

CONTENTS: [Vol 1] [1-2], Title page, verso blank.; [3]-4,
"Al Lettore."; [5]-96, "Nozioni Preliminari."; 97-272, Text,
descriptive mineralogy.

[Vol 2] [273]-[274], Title page, verso blank.; 275-
500, Text, descriptive mineralogy continued.; [501]-502,
"Indice Delle Materie | Contenute | Nell'Introduzione
Alla Mineralogia."; 503-512, "Indice Mineralogico."

VERY SCARCE. After the introduction which
contains general explanations of the formation,
association, occurrence, alteration, decomposition, and
distribution of minerals, the author proposes his
own system of mineral classification based on Haüy.
Each mineral arranged in the system has expansive
notes describing the usual chemical and physical
characteristics, localities, and uses in medicine. A
table of contents and an index to the mineral species
mentioned in the text concludes the work.

REFERENCES: BL: [726.h.21.]. • BMC: 1, 328. • *Freilich
Sale Catalog*: no. 121. • Roller & Goodman, *Catalogue*, 1976:
1, 214.



CAVALLO

CAVALLO, Tiberius. (BORN: Naples, Italy, 30 March
1749; DIED: London, England, 21 December 1809)
Italian physicist & acoustic expert.

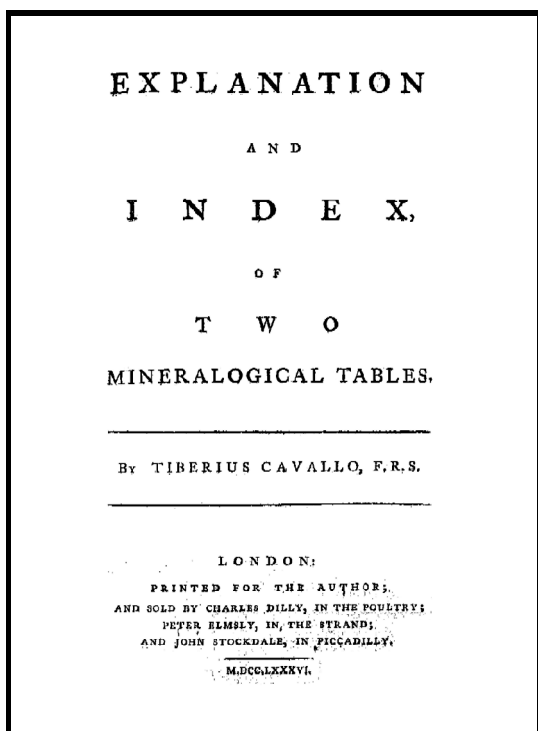
Cavallo emigrated to England in 1771, where he
became generally interested in the science of physics, but
became particularly interested in the study of electrical
phenomena. Cavallo's studies in this field culminated in the
publication of his most important work, *A Complete Treatise
on Electricity in Theory and Practice* (1st ed., London,
1777). He also published many other works on physical
phenomena, including magnetism, fluid and gas mechanics,
and musical sounds. Cavallo was elected a Fellow of the
Royal Society in 1779.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 44-5. • BBA: I 210, 394-407. • *Biographie Universelle*: 7, 257. • *Dizionario Biografico Italiani*: 22, 792-94 [by U. Baldini]. • DNB: 3, 1246-47 [by R. Hunt]. • Drugulin, *Sechstausend Portraits*, 1863: nos. 884-5. • DSB: 3, 153-54 [by J.L. Heilbron]. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 1, 235. • Partington, *History of Chemistry*, 1961-70: 3, 300. • Poggendorff: 1, cols. 405-6. • Thomas, *Dictionary of Biography*, 1884: 548. • WBI. • *World Who's Who in Science*: 313.

2 charts.

Extremely Rare (no copy traced). These tables recording a series of notes illustrative of mineralogy were issued with a companion volume, *Explanation and Index of Two Mineralogical Tables*.

REFERENCES: BL: [B.548.(3.)]. • Dana's 7th (Bibliography): 69. • LKG: XII 112a*.



EXPLANATION, 1786

1102. — English, 1786.

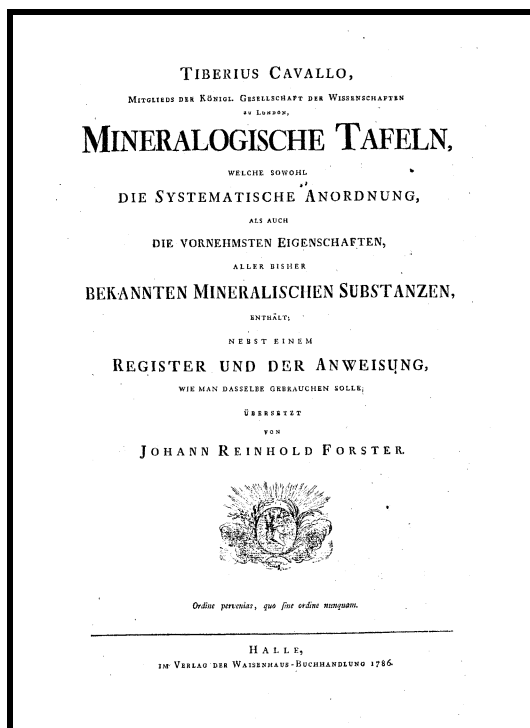
Explanation | And | Index | Of | Two | Mineralogical Tables. | [rule] | By Tiberius Cavallo, F.R.S. | [rule] | London: | Printed For The Author; | And Sold By Charles Dilly, In The Poultry; | Peter Elmsley, In The Strand; | And John Stockdale, In Piccadilly. | [rule] | M.DCC.LXXXVI.

8°: A-B⁸ C⁶; 22ℓ.; [1]-44 p.

CONTENTS: [1-2], Title page, verso blank.; [3]-44, Text.

VERY RARE. Issued with *Mineralogical Tables*. The *Tables* having been published in folio are essentially never seen together with their Explanation. This text describes the author's view of how minerals should be classified.

Tables, 1786: Mineralogical Tables by Tiberius Cavallo, F.R.S. [Contains, "Mineralogical Table 1, containing the classes, orders, genera, species, and varieties of mineral substances," and "Mineralogical Table 2, containing the principal properties of mineral substances."]. London, Printed for the Author, 1786. 2°:



MINERALOGISCHE TAFELN, 1786

1103. German transl., 1786: Tiberius Cavallo, | Mitglieds der Königl. Gesellschaft der Wissenschaften | zu London, | Mineralogische Tafeln, | welche sowohl | die Systematische Anordnung, | als auch | die vornehmsten Eigenschaften, | aller bisher | bekannten Mineralogischen Substanzen, | enthält; | nebst einem | Register und der Anweisung, | wie man dasselbe gebrauchen solle; | übersetzt | von | Johann Reinhold Forster. | [ornament] | Ordin pervenias, quo sine ordine nunquam. | [rule] | Halle, | Im Verlag der Waisenhaus-Buchhandlung 1786.

2°:)(-2)(² 3)(¹ 8; 13ℓ.; [10] p., 4 folding tables. No pagination indicated. PAGE SIZE: 430 x 254 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede des Uebersetzers"—signed D. Johann Reinhold Forster, 12 October 1786.; [2 pgs], "Vorrede des Verfassers."; [1 pg], "Erklärung | der | Tafeln und des Registers."; [3 pgs], "Register."; [8 leaves], 4 double-page tables bound at the fold into the spine.

RARE. Translation by Johann Reinhold Forster [q.v.] combining Cavallo's two works, *Mineralogical Tables* (London, 1786) and *Explanation and Index of the Tables* (London, 1786) into a single work.

The work begins with translator's forward, followed by a translation of Cavallo's forward. An clarification of the tables and an index to the species contained on the tables precedes the tables proper.

REFERENCES: LKG: XII 113a.

1104. German transl., 1790: Tiberius Cavallo | Mitglieds der König. Gesellschaft der Wissenschaften | zu London, | Mineralogische Tafeln, | welche sowohl | Die Systematische Anordnung, | als auch | Die Vornehmsten Eigenschaften | aller bisher | Bekannten Mineralischen Substanzen, | enthalten; | nebst einem | Register und der Anweisung, | wie man dasselbe gebrauchen solle; | und mit einer neuen | Tafel ueber die Gebirgs-Lehre, | so wie auch ueber die | Aeusserlichen Kennzeichen Der Minerlien. | [tapered rule] | Uebersetzt, verbessert und vermehrt In Dieser Zweiten Auflage | von | D. Johann Reinhold Forster, | [...4 lines of titles and memberships...]. | [tapered rule] | Ordine pervenies, quo sine ordine nunquam. | [ornate rule] | Halle, | Im Verlag Der Waisenhaus-Buchhandlung. | 1790.

2°: π^{16} ; 16 ℓ .; [32] p. No signature, foliation or pagination marks on the ℓ . PAGE SIZE: 462 x 290 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Friedrich Anton Freyherrn von Heinitz.; [1 pg], Blank.; [1 pg], More dedications, signed Johann Reinhold Forster, 22 October 1790.; [1 pg], Blank.; [2 pgs], "Vorrede Des Uebersetzers | Zu Dieser Zweiten Verbesserten Und Vermehrten Auflage."—signed Johann Reinhold Forster, "an meinen 62nd Geburtstag" [=22 October 1790].; [10 leaves], 5 double page tables, printed on one side of the paper, and bound at the fold into the spine.; [4 pgs], "Register."

RARE. An updated and corrected translation by Johann Reinhold Forster [q.v.] of *Mineralogische Tafeln* (1st ed., Halle, 1786) [see previous entry]. In this edition, two pages of dedication have been added, and the translator's forward has been updated. The number of tables has also increased from four to five.

REFERENCES: LKG: XII 113a.

CELLIO, Marco Antonio. *Italian astronomer.*

Cellio was professor of astronomy at the Physico-Mathematical Academy of Rome.

REFERENCES: ABI: I 282, 146. • *Dizionario Biografico Italiani* [not listed]. • Jöcher, *Gelehrten-Lexikon, Supplement*. • LKG: 283. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: I, cols. 409-10. • WBI.

1105. — Italian, 1680.

Il Fosforo | O' Vero La | Pietra Bolognese | Preparata per rilucere frà | l'ombre. | Fatica Di | Marc' Antonio Cellio | Dell'Accademia Fisicomatte- | matica di Roma, | E dal medemo consecrata | All'Eccellentissimo Principe | Signor D. | Marc' Antonio | Borghese. | [ornament] | In Roma, Per il Vannacci. 1680. | [rule] | Con Licenza de'Superiori.

12°: A-D¹² E³; 51 ℓ .; [1]-102 p. Ornamental initials.

VERY RARE. The first work written in Italian on the phosphorescent barite found near Bologna and then called the 'Bolognian stone'. Here, Cellio describes the location where the Bolognian stone could be found, chiefly on Monte Paterno, indicating that a typical size is that of an orange. He notes that the color varies, but he says the white ones are the most phosphorescence sensitive.

REFERENCES: BL: [1036.a.27.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 13. • Harvey, *History of Luminescence*, 1957: p. 315. • Hoover Collection: no. 209. • LKG: XVI 113. • NUC: [no copy listed]. • *Philosophical Transactions of the Royal Society of London*: 2 (1681), 515 [review & abstract].

CENTRALBLATT FÜR MINERALOGIE.

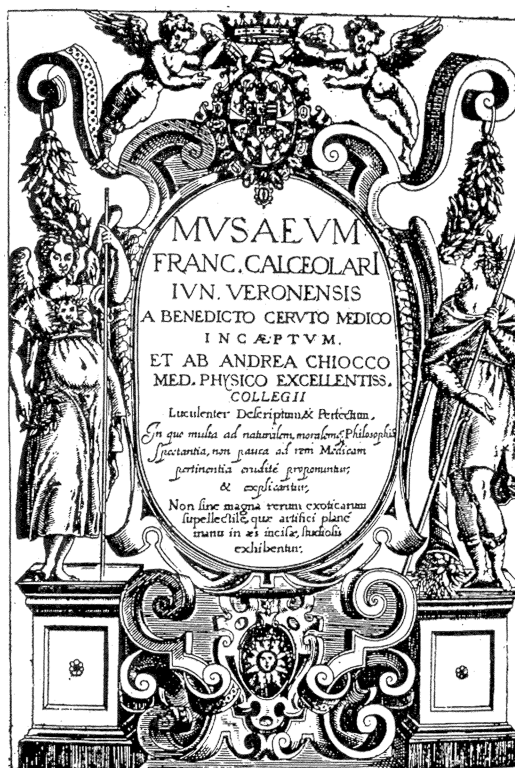
1106. — German, 1900 [Periodical].

Centralblatt | für | Mineralogie, Geologie und Palaeontologie | in Verbindung mit dem | Neuen Jahrbuch für Mineralogie, Geologie und Palaeontologie, | herausgegeben von | M. Bauer, E. Koken, Th. Liebisch | in Marburg. in Tübingen. in Göttingen. | [rule] | Jahrgang 1900. | Mit zwei Portraits und mehreren Figuren. | [ornament] | Stuttgart. | E. Schweizerbart'sche Verlagshandlung (E. Nägele). | 1900.

Vol. 1 (1900)-Vol. 25 (1924). In 1925 it was continued as *Abteil A: Mineralogie und Petrographie*.

VERY SCARCE. First edited by MAX BAUER, Ernst Koken [1860-], and THEODOR LIEBISCH, this major periodical founded at the beginning of the 20th century, contains many important original articles, announcements of recent discoveries, reviews of books, obituaries, abstracts, and other notices of mineralogical, geological and palaeontological science. Its monthly issues were issued to compliment the *Neues Jahrbuch für Mineralogie* that was published in biannual issues. In 1925 it was continued as *Abteil A: Mineralogie und Petrographie* of the *Neues Jahrbuch für Mineralogie*.

REFERENCES: *Union List of Serials*: ?? • *USGS Library Catalog*.



MVSAEVM CALCEOLARI, 1622

CERUTO, Benedicto. (BORN: ; DIED: 1620) *Italian pharmacist.*

REFERENCES: ABE: I 208, 36. • *Dizionario Biografico Italiani* [not listed]. • WBI.

1107. — Italian, 1622 [Collection catalog].

[Contained within an elaborate engraved border:]
Mvsaevm | Franc. Calceolari | Iv. Veronensis
| A Benedicto Cervto Medico | Incæptvm. | Et
Ab Andrea Chiocco | Med. Physico Excellentiss. |
Collegii | Luculenter Descriptum & Perfectum, |
In quo multa ad naturalem, moralem Philosophia
| Spectantia, non pauca ad rem Medicam |
pertinentia eruditè proponuntur, | & explicantur.
| Non sine magna rerum exoticarum | supellectile,
quæ artificii planè | manu in æs incisæ, studiosis |
exhibentur. | [At bottom of page:] Verona . October
M.D.C.XXII.

2^o: [50], 746 [i.e., 748] p., engraved title page, folding engraved plate of the museum's interior, 43 engraved plates in the text (8 of which are full-page).
COLOPHON: Veronæ, Apud Angelus Tamus, 1622.

PLATES: The fine plates were designed by the Verona artist J.B. Bertonus and engraved by the goldsmith and engraver Hieronymus Viscardus.

RARE. Co-authored with Andrea Chiocco [see note below]. FRANCESCO CALZOLARI, a wealthy Veronese pharmacist, created toward the end of the 16th century, one of the earliest natural history collections, both competing and collaborating with his colleagues and rival collectors ULISSE ALDROVANDI in Bologna and MICHELE MERCATI in Rome. Calzolari's collection was first described in 1584 by GIOVANNI BATTISTA OLIVA of Cremona, but it was his grandson, Francesco junior, who inherited the accumulation, and added to it, that history is indebted to for this authoritative account of the collection. It was the heir that hired the two physicians, Ceruti and Chiocco to catalog the museum.

Francesco Calzolari senior was a native of Verona. After studying under the naturalist Luca Ghini [1500–1556], he went on to the University of Padua where he learned the preparation of pharmaceutical prescriptions using various plant, animal, and mineral substances. He was an excellent student, and eventually left school to open in the main square of Verona his own shop, called “The Golden Bell.”

In order to stock his shop with raw materials, Calzolari would walk the mountains and valleys of the surrounding area in order to collect plants, minerals and animals. Soon he was driven by a fascination with natural history, and he worked through dealers and travellers to acquire all sorts of herbs, fruits, animals, birds, minerals and fossils from throughout Europe and Asia Minor. These specimens he added to a growing collection displayed in a special room at the rear of his pharmaceutical shop. Contemporary accounts indicate that each specimen was accompanied by a detailed label. As the nature of Calzolari's museum became

known, a steady stream of physicians, naturalists, friends, and curiosity seekers began to visit. Eventually the fame of “The Golden Bell” spread throughout Europe, and it became a site to visit when travelling through Verona.

Ceruto and Chiocco's catalog preserve a record of the museum at its height. The exhibit room is beautifully illustrated in the folding frontispiece. It shows a room lined with nicely crafted open shelves above a series of drawers at waist level. Underneath the drawers are stored various urns and vases, while stuffed birds rest on top of the shelves. From the ceiling are hung numerous preserved animals, including snakes, fish, lizards, a porcupine, and apparently a human head(!). Many items that were typical fare of ‘Wunderkammer’ of the period are present in Calzolari's museum. The strength of the collection lay in the numerous botanical and mineralogical specimens, some of which are illustrated on the finely engraved plates. Within the section on minerals and fossils is the first publication of Girolamo Fracastoro's [1483–1553] idea proposed in 1517 that fossils originated from once living animals. There creation being caused by the changing positions of land and sea. The catalog ends with a description of the library and gallery of paintings of famous doctors, botanists, philosophers, and mathematicians. In the 1640's the collection was sold off, part going to a Veronese pharmacist named Mario Sala, and part being acquired by LODOVICO MOSCARDO and incorporated into his own large collection.

The museum was divided into several sections: (1) corals, (2) clays and earths, (3) crystal-lined geodes, amethyst, fluorite, diamond, opal, cat's-eye, emerald, topaz, malachite, jasper, beryl, sapphire, lapis lazuli, turquoise, ruby, garnet, chalcedony, sardonyx, carnelian, agate, magnetite, hematite, dolomite, gypsum, and some fossils, (4) gold, silver, cinnabar, copper, and iron minerals, antimony minerals, coal, talc, alum, cassiterite and others, (5) the herbarium, and (6) preserved animals, birds and snakes, including a supposed horn of a unicorn.

Andrea Chiocco. (BORN: c1562; DIED: 3 April 1624) *Italian pharmacist.*

[BIOGRAPHY NEEDED]

REFERENCES: Accordi, B., “The Musaeum Calceolarium (XVth. Century) of Verona Illustrated in 1622 by Ceruti and Chiocco,” *Geologica Roma*, 16 (1977), 21–54. • Beekman, *Systematische Mineralogie*, 1906: 25. • BL. • Bromhead, C.E.N., “Flavus or blavus: a difficulty in understanding early descriptions of minerals,” *Mineralogical Magazine*, 28, 104–107. • Cobres, *Deliciae Cobresianæ*, 1782: 1, 98. • Fahy, C., *Printing a book at Verona in 1622: the account book of Francesco Calzolari junior*. Paris, Foundation Custodia, 1993. [8], [1]–171, [25] p. • *Freilich Sale Catalog*: no. 122. • Gatterer, *Mineralogischen Literatur*, 1798–9: 1, 278 [says this edition reprinted at Verona in 1625]. • Murray, *Museums*, 1904: 1, 83–4, 236 & 2, 154. • Nissen (ZBI): no. 857. • NLM 17th Century Books (Krivatsy): no. 2371. • NUC. • Wallerius, *Brevis Introductio*, 1779: 30–1. • Wellcome Catalog (Books): 1, no. 1412. • Wilson, *History of Mineral Collecting*, 1994: 25–7, 163–4 & 208. (Chiocco) ABI:

CESALPINO

I 292, 185-186. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Dizionario Biografico Italiani*: 25, 11-2. • Jöcher, *Gelehrten-Lexikon*, Supplement. • WBI.



CESALPINO

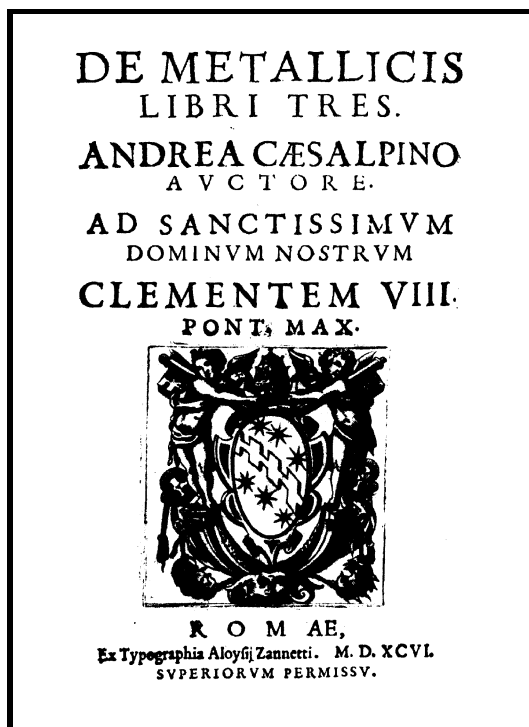
CESALPINO, Andrea. (BORN: Tuscany, Italy, 6 June 1519; DIED: Rome, Italy, 23 February 1603) *Italian physician.*

Cesalpino was physician to Pope Clement VIII. He made original contributions to the fields of physiology, botany, geology and chemistry, and his theory on the circulation of the blood anticipated William Harvey's [1578-1657] in important ways. Cesalpino's *De Plantis* (Florentiae, 1583) laid out principles of arrangement and classification of botany that were developed through Joachim Jung and John Ray into the system designed by Linnaeus.

REFERENCES: ABI: I 286, 145-183; II S 21, 52. • Arcieri, J., *The circulation of the blood and Andreea Cesalpino of Arezzo*. New York, 1945. Frontispiece (portrait). • Capparoni, *Profilii Bio-Bibliografici*, 1928-32: 1, 24-27, portrait. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 270 [4 portraits listed]. • *Dizionario Biografico Italiani*: 18, 122-5 [by A. De Ferrari]. • DSB: 15, 80-1 [by K. Mägdefrau]. • *Enciclopedia Biografica Cattolicesimo*. • Esposito-Vitolo, A., "Michele Mercati (1541-1593)," *Boll. Acc. Euteleti*, 26 (1950), 20-38: 3, 417. • Fuchs, C., *Andreas Caesalpinus. De cuius viri ingenio, doctrina, et virtute pauca delibat*. 1798. • Hirsch, *Biographisches Lexikon*, 1884-8: 1, 866-8. • *ISIS*, 1913-65: 1, 239. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Lais, G., "Documenti inediti di Andrea Cesalpino," *Atti Pontif. Acc. Nuovi Lincei*, 35 (1882), 95-102. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 589-90. • *Nouvelle Biographie Générale* (Hoefer): 9, cols. 436-40. • NY Academy Portrait Catalog: 1 [9 portraits listed]. • Poggendorff: 1, col. 358. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: 1, 478. • Thomas, *Dictionary of Biography*, 1884: 557. • Viviani, U., *Vita ed opere di Andrea Cesalpino*. Arezzo, 1922. [2], xi, 237 p. • WBI. • Wellcome Catalog (History): 14, 417-9 [25 refs.]. • *World Who's Who in Science*: 315.

1108. — Latin, 1596 [First edition].

De Metallicis | Libri Tres. | Andrea Cæsalpino | Avctore. | Ad Sanctissimvm | Dominvm Nostrvm |



DE METALLICIS LIBRI TRES, 1596

Clementem VIII. | Pont. Max. | [ornament] | Romæ; | Ex Typographia Aloysij Zannetti. M. D. XCVI. | Svpriorvm Permissv.

4°: a-b⁴ A-Z⁴ 2A-2E⁴; 120ℓ.; [16], 1-222, [2] p., engraved arms of Pope Clement VIII on title page. Mispaginations: 445 for 145, 447 for 147, 181 for 177, 184 for 180, 177 for 181 & 180 for 184. PAGE SIZE: 215 x 151 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], Dedication.; [1 pg], "Perlegi hoc opus de Metallis ..."; [9 pgs], Index.; [1 pg], Blank.; 1-222, Text.; [1 pg], Colophon: "... Romae, | Ex Typographia Aloysij Zannetti. MD. XCVI. | Svpriorvm Permissv."; [1 pg], Blank.

RARE. Cesalpino's last work, dedicated to his major patron, Pope Clement VII. It is a famous compendium on metals and minerals by a remarkable Renaissance scientist celebrated for achievements in several branches of science. It was written as a companion to the author's famous botanical work, *De Plantis* (Florentiae, 1583), and was intended to extend his visionary theory of botanical classification to the mineral kingdom. In addition, at the end of the 16th century, MICHELE MERCATI had begun to classify and catalog the metallic specimens held in the Vatican's mineralogical collection, but died before the manuscript was published. Cesalpino had been Mercati's teacher, and after the later's premature death, succeeded him as papal physician in Rome where he researched the *De Metallicis*. Cesalpino intended his treatise to supplement Mercati's work by not only describing

metals but also focusing on the papal collection of gems and marbles.

Cesalpino divides his work into 3 major sections. Book I deals with the genesis of minerals and sketches a theory of classification according to their admixtures of the four elements. Book II treats limestone, marble, precious stones, crystals and salts, and the processes by which crystallization gives minerals their regular form, while Book III is devoted to metals and mining. Throughout the author provides commentary from ancient and contemporary sources, together with his own insightful observations.

De Metallicis is an important book for giving an early recognition to the true organic nature of fossils, the phenomenon of crystallization, speculating on the existence of oxygen and observing that gases have weight. In addition, along with GEORG AGRICOLA's *De Re Metallica* (1st ed., Basel, 1556), this work provided scholarly background for William Gilbert's *De Magnete* (1st ed., London, 1600). A whole chapter is devoted to the magnet, and there is material on the increase of weight on the calcination of lead, which foreshadowed the famous experiments on oxidation in the 18th century.

De Metallicis is also of interest, however, as a compendium of fantastic lore culled from ancient and contemporary sources: "Not only do we hear of a lynx stone near Naples that bears mushrooms, which Cesalpino regards as a great marvel but which may be a fact, but we have the gem jasper suspended as an amulet or are regaled with the virtues of bezaar or bezoar stones. One from Persia that grows in goats is tested in this wise. They smear a thread with poison such as the juice of a white hellebore and draw it with a needle through the foot of a dog or other part of an animal, leaving the thread in the wound. When symptoms of poisoning aggravate, they bring the stone near, and if it is genuine, the animal feels relief from that remedy ... " (Thorndike).

REFERENCES: Adams, *Cambridge Books*, 1967: C-19. • BL. • Brunet: 1, 1451. • CBN: 25, col. 870. • Dana's 7th (Bibliography): 69. • DSB: 15, 80-1. • *Freilich Sale Catalog*: no. 123. • Geikie, *Founders of Geology*, 1905: p. 53. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 51-5. • Hoover Collection: no. 212. • Mottelay, *History of Electricity & Magnetism*, 1922: 502. • Nordenskiöld, *History of Biology*, 1935. • Norman Catalog: no. 433. • NUC: 101, 606-7 [NC 0266081]. • Partington, *History of Chemistry*, 1961-70: 2, 89-92. • Roller & Goodman, *Catalogue*, 1976: 1, 218. • Sinkankas, *Gemology Bibliography*, 1993: no. 1218 [not seen]. • Thorndike, *History of Magic*, 1923-58: 6, 334-5. • Wellcome Catalog (Books): 1, no. 1183.

1109. 2nd edition, 1602: De Metal- | lici Libri | Tres. | Andrea Caesal- | pino Aretino. | Medico & Philosopho | auctore. | [Printer's device showing farmers working a field contained within a circular frame with the wording "Spes Alit Agricolas."] | Noribergæ, | Recusi, curante Conrado Agricola. | [rule] | M D CII.

4°: a-b⁴ A-Z⁴ 2A-2E⁴; 120ℓ.; [16], 1-222, [2] p. Ornamental head- and tailpieces. Colophon (2E⁴r): "Noribergæ, | Ex Officina Katharinæ, Viduæ Alexan- | dri Theodorici. | [rule] | M D CII." PAGE SIZE: 200 x 150 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Ph. Scherbivus, Er- | nesto Sonero Medi- | co & Philosophi

S.D."; [10 pgs], "Index."; [1 pg], Blank.; 1-222, Text.; [1 pg], "Corrigenda."—colophon at bottom.; [1 pg], Blank.

VERY SCARCE. Edited by Philip Scherb [1555-1605], the text has been reset with what appear to be minor revisions.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 12, 15 & 25. • BL. • CBN: 25, col. 870. • Cobres, *Deliciae Cobresianæ*, 1782: 2, 680. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 112. • Geikie, *Founders of Geology*, 1905: p. 53. • Hoover Collection: no. 213. • LKG: III 34. • NUC: 101, 606-7 [NC 02660880]. • Partington, *History of Chemistry*, 1961-70: 2, 89-92. • Sinkankas, *Gemology Bibliography*, 1993: no. 1219. • VD17: 12:133252R. • Wallerius, *Brevis Introductio*, 1779: 27. • Wellcome Catalog (Books): 1, no. 1184.

CESÀRO, Giuseppe Raimondo Pio. (BORN: Naples, Italy, 6 September 1849; DIED: Liège, Belgium, 20 January 1939) *Italian mineralogist & crystallographer.*

Cesàro was the brother of the distinguished mathematician Ernesto (??-??). Although he began by studying engineering, Cesàro early abandoned this field, and began to search for his true vocation. Ultimately he discovered mineralogy, and it was the pursuit of this science that became his profession. He eventually found an appointment in Belgium where he worked as assistant to the mineralogist Gustav Dewalque [q.v.] at the University of Liège. Upon Dewalque's retirement in 1891, Cesàro was appointed professor of mineralogy and crystallography. In 1919, he was nominated as director of the mineralogical museum in Liège. Among his publications, Cesàro authored many papers usually published in the journals of various Belgium Scientific Societies centered around describing the minerals of Vesuvius, Italy and Belgium, as well as the forms of calcite.

REFERENCES: ABF: II 133, 287. • *Annales de la Société Géologique de Belge*: 62 (1939), B285-B295, portrait. • *Bulletin de la Société Française de Minéralogie*: 2?? (1939), 91-95. • *C.R. Acad.Sci., Paris*: 208 (1939), 397-99. • *Dizionario Biografico Italiani*: 24, 219-20 [by A. Siconolfi]. • Lorenz, *Catalogue Général*, 1869-1945. • *Mineralogical Magazine*: 25 (1939), 285-86, portrait. • Poggendorff: 4, 234, 5, 211, 6, 420 & 7, 759. • Sarjeant, *Geologists*, 1980: 2, 708. • WBI.

1110. — French, 1891.

Cristallographie & Mineralogie. Cours donné ... à l'Université de Liège. Liège, 1891.

4°: 104 p.

VERY SCARCE. Lithographic production that acted as a syllabus to Cesàro's class of mineralogy and crystallography at the University of Liège in Belgium.

REFERENCES: BMC: 1, 332.

1111. — French, 1914.

Elements de Cristallographie et de Mineralogie. Imprimerie Liegeoise, Henri Poncet, Societe Anonyme, Liege, 1914.

8°: 90, [1] p., 71 illus.

VERY SCARCE. Divided into two parts. The first covering crystallography describes the elements of symmetry, faces and edges, modifying faces, notation, the theories of Haüy, the seven crystallographic systems. The second is a mineralogical text, mostly descriptive in nature.

REFERENCES: BMC: 6, 193.



CESI

CESI, Bernardo (Federico). (BORN: Mantua, Italy, 1581; DIED: Modena, Italy, 4 September 1630) *Italian Jesuit & naturalist.*

Cesi was professor of philosophy, theology and morals first at the University of Parma, then later at Modena. He died during an outbreak of the plague. He may have been related to an illustrious and powerful Italian family of the time. They had several members rise to the highest ranks of the Catholic church during the 16th and 17th centuries.

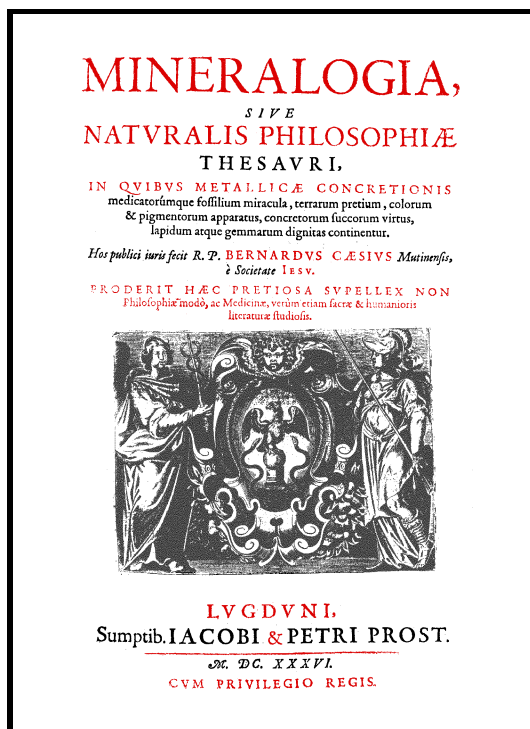
REFERENCES: ABI: II 136, 161-163; II S 21, 78-80. • *Biographie Universelle*: 7, 584. • *Catalogue of Portraits of Naturalists*: 271 [1 portrait listed]. • *Dizionario Biografico Italiano*: 24, 256-8. • *Imperatori, Dizionario di Italiani all'Estero*, 1956. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Litta, P., *Famiglie celebri d'Italia*. Milano, 1819: 2, 130-60 [on the Cesi family]. • *Nouvelle Biographie Générale* (Hoefer): 9, col. 503. • Poggendorff: 1, col. 413. • WBI. • *World Who's Who in Science*: 315.

1112. — Latin, 1636 [Issue A].

[In red:] Mineralogia, | [in black:] sive | [in red:] Natvralis Philosophiæ | [in black:] Thesavri, | [in red:] In Qvibvs Metallicæ Concretionis | [in black:] medicatorúmque fossilium miracula, terrarum pretium, colorum | & pigmentorum apparatus, concretorum succorum virtus, | lapidum atque gemmarum dignitas continentur. | Hos publici iuris fecit R.P. [in red:] Bernardvs Cæsivs [in black:] Mutinensis, | è Societate [in red:] Iesv. | Proderit Hæc Pretiosa Svpellex Non | Philosophiæ modò, ac Medicinæ, verùm etiam sacræ & humanioris | literaturæ studiosis. | [in black, vingette] | [in red:] Lvgdvni, | [in black:] Sumptib. Iacobi [in red:] & [in black:] Petri Prost | [in red, rule] | [in black:] M. DC. XXXVI. | [in red:] Cvm Privilegio Regis.

2°: [a]⁴ ã⁴ A-Z⁶ Aa-Zz⁶ Aaa-Mmm⁶; 356ℓ.; [16], 1-626, [69], [1] blank p. Title in red and black, printed in double column with woodcut initials and ornaments. PAGE SIZE: 345 x 225 mm.

CONTENTS: [2 pgs], Half title page, "R.P. Bernardvs



MINERALOGIA, 1636

Cæsivs De Mineralibvs," verso blank.; [2 pgs], Title page, verso blank.; [4 pgs], Dedication to Francis I.; [2 pgs], "Approbationes."; [6 pgs], "Index Librorum, Capitum, Sectionum, Paragraphorum."; [1]-136, "Liber Primvs De Mineralogiæ, et Mineralivm Natvra, et Principiis in Commvni."; 137-287, "Liber Secvndvs De Terris Insignibvs."; 288-512, "Liber Tertivs De Svccis Concretis."; 513-608, "Liber Qvartvs De Lapidibvs, et Gemmis."; 609-626, "Liber Qvintvs De Metallis."; [69 pgs], "Index Rervm, et Verborum Notabilium."; [1 pg], Blank.

VERY SCARCE. Compendium of all the author ever discovered or read about the subject of mineralogy. It was published posthumously from notes he left by his Order at Lyon six years after his death. Printed in a double column format in a relatively small type-size, the work is a vast storehouse of all things mineralogical, including new ideas, restatements of earlier authors, observations and superstitious belief. The uncritical selection of material lead Webster in his *Metallographia* (London, 1671, p. 29) to criticize the author as too digressive and as mixing tares with the wheat. Partington thinks the use of the term "Mineralogia" in the title is the first modern usage of the word.

The work opens by listing the evils and benefits of mineralogy. Mining is considered dangerous because of the lurking underground spirits. Mining also destroys fields and forests. So asks Cesi, why destroy mother Earth? The evil consequences from riches, iron weapons and especially gold are described, with much poetical quotation in the case of gold and silver. However, the author notes that the study of mineralogy helps one to understand the bible. It provides medicines and

money, ornaments for religious purposes, tools used in agriculture, industry, painting, music and alchemy. Cesi then answers the question he posed earlier and declares mineralogy to be a true philosophy, worthy of careful study.

The numerous citations to earlier authors provide evidence of Cesi's wide reading. Commonly, many authors are referenced on single points. For example, in describing the generation of minerals he closely follows Aristotle but also cites Theophrastus, Avicenna, Albertus Magnus, Agricola, Gregorius Reisch, Pliny, Boodt, Francis Rueus, Marbode, the Bible, and numerous church fathers. The author is uncritical of the views he presents, and accepts the authority of the ancient and medieval authors as his own. He believes that the Sun, Moon and stars influence the subterranean world of minerals and metals, and that gems have miraculous curative powers. He includes a chapter on the magnet, and although widely read, omits to mention Gilbert's *De Magnete* published in 1600. As one progresses throughout the volume, citations to references become less frequent, perhaps indicating the author was still preparing the manuscript when death unexpectedly occurred.

Cesi divides his work into five sections: the first, treats mineralogy proper, the second the economic and commercial aspects, for example colors and pigments, the third, lapidifying juices of the earth that congeal into minerals, the fourth gems and the fifth metals. At the conclusion is a long and thankfully comprehensive index. Much insight about ancient philosophy and its affect in the 17th century can be gained from studying Cesi's *Mineralogia* but one must sift through a large amount of superfluous information to reach those gems.

REFERENCES: Adams, *Birth and Development*, 1938: 164-5. • Beekman, *Systematische Mineralogie*, 1906: 27. • Cobres, *Deliciae Cobresianae*, 1782: 2, 676. • Dana's 7th (Bibliography): 69. • Hoover Collection: no. 214. • LKG: III 47. • NUC: 101, 644 [NC 0267112]. • Partington, *History of Chemistry*, 1961-70: 2, 94. • Roller & Goodman, *Catalogue*, 1976: 1, 219. • Sinkankas, *Gemology Bibliography*, 1993: no. 1220. • Thorndike, *History of Magic*, 1923-58: 7, 254-57. • Ward & Carozzi, *Geology Emerging*, 1984: no. 457. • Wellcome Catalog (Books): 1, no. 1190.

1113. Issue B, 1636: [In red:] Mineralogia, | [in black:] sive | [in red:] Natvralis Philosophiæ | [in black:] Thesavri, | [in red:] In Qvibvs Metallicæ Concretionis | [in black:] medicatorúmque fossilium miracula, terrarum pretium, colorum | & pigmentorum apparatus, concretorum succorum virtus, | lapidum atque gemmarum dignitas continentur. | Hos publici iuris fecit R.P. [in red:] Bernardvs Cæsivs [in black:] Mutinensis, | è Societate [in red:] Iesv. | Proderit Hæc Pretiosa Svpellex Non | Philosophiæ modò, ac Medicinæ, verùm etiam sacræ & humanioris | literaturæ studiosis. | [in black, vingette] | [in red:] Lvqdvni, | [in black:] Sumptib. Iacobi [in red:] & [in black:] Petri Prost | [in red, rule] | [in black:] M. DC. XXXVI. | [in red:] Cvm Privilegio Regis.

2°: [a]⁴ ã⁴ A-Z⁶ Aa-Zz⁶ Aaa-Mmm⁶; 356ℓ.; [16], 1-626, [69], [1] blank p. Title in red and black, printed in double column with woodcut initials and ornaments. PAGE SIZE: 355 x 225 mm.

CONTENTS: [2 pgs], Half title page, "R.P. Bernardvs Cæsivs De Mineralibvs," verso blank.; [2 pgs], Title page, verso blank.; [4 pgs], Dedication to Carolo De Nevf-ville.; [1 pg], "Approbationes."; [1 pg], Blank.; [6 pgs], "Index

Librorum, Capitum, Sectionum, Paragraphorum."; [1]-136, "Liber Primvs De Mineralogiæ, et Mineralivm Natvra, et Principiis in Commvni."; 137-287, "Liber Secvndvs De Terris Insignibvs."; 288-512, "Liber Tertivs De Svccis Concretis."; 513-608, "Liber Qvartvs De Lapidibvs, et Gemmis."; 609-626, "Liber Qvintvs De Metallis."; [69 pgs], "Index Rervm, et Verborum Notabilium."; [1 pg], Blank.

VERY SCARCE. A restatement of the previous issue with the Dedication now directed to Charles de Neufville, Marquis De Nevfville, and the Approbationes reduced to one page. Otherwise, the text appears to be identical to issue A.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 1221. • Wellcome Catalog (Books): 1, no. 1191.

1114. Issue C, 1637: [In red:] Mineralogia, | [in black:] sive | [in red:] Natvralis Philosophiæ | [in black:] Thesavri, | [in red:] In Qvibvs Metallicæ Concretionis | [in black:] medicatorúmque fossilium miracula, terrarum pretium, colorum | & pigmentorum apparatus, concretorum succorum virtus, | lapidum atque gemmarum dignitas continentur. | Hos publici iuris fecit R.P. [in red:] Bernardvs Cæsivs [in black:] Mutinensis, | è Societate [in red:] Iesv. | Proderit Hæc Pretiosa Svpellex Non | Philosophiæ modò, ac Medicinæ, verùm etiam sacræ & humanioris | literaturæ studiosis. | [in black, vingette] | [in red:] Lvqdvni, | [in black:] Sumptib. Iacobi [in red:] & [in black:] Petri Prost | [in red, rule] | [in black:] M. DC. XXXVII. | [in red:] Cvm Privilegio Regis.

2°: [a]⁴ ã⁴ A-Z⁶ Aa-Zz⁶ Aaa-Mmm⁶; 356ℓ.; [16], 1-626, [69], [1] blank p. Title in red and black, printed in double column with woodcut initials and ornaments. PAGE SIZE: 350 x 222 mm.

CONTENTS: [2 pgs], Half title page, "R.P. Bernardvs Cæsivs De Mineralibvs," verso blank.; [2 pgs], Title page, verso blank.; [5 pgs], Dedication to Carolo De Nevf-ville.; [1 pg], "Facultas ... | ... | Approbationes."; [6 pgs], "Index Librorum, Capitum, Sectionum, Paragraphorum."; [1]-136, "Liber Primvs De Mineralogiæ, et Mineralivm Natvra, et Principiis in Commvni."; 137-287, "Liber Secvndvs De Terris Insignibvs."; 288-512, "Liber Tertivs De Svccis Concretis."; 513-608, "Liber Qvartvs De Lapidibvs, et Gemmis."; 609-626, "Liber Qvintvs De Metallis."; [69 pgs], "Index Rervm, et Verborum Notabilium."; [1 pg], Blank.

VERY SCARCE. RARIEST ISSUE. Essentially the same text as used in issue B [described above] with a new date on the title page and the expansion of the dedication to 5 pages. Additional information is also included on the "Approbationes" page immediately following the dedication.

REFERENCES: *Freilich Sale Catalog*: no. 113. • Roller & Goodman, *Catalogue*, 1976: 1, 219. • Sinkankas, *Gemology Bibliography*, 1993: no. 1222.

CHAMBON, Joseph. (BORN: Grignon, Provence, France, 1647; DIED: Grignon, Provence, France, c1732) *French physician.*

Chambon was a physician on the faculty at Aignon. Later he opened a practice in Marseilles, but traveled to Poland to become physician to King Sobiesky. He remained until the siege of Vienna, when he returned to France by way of Holland and England. Chambon retired to Grignon, where he lived with a brother.

REFERENCES: ABF: I 200, 256-264. • Cole, *Chemical Literature*, 1988: no. 247. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 151. • *Nouvelle Biographie Générale* (Hoefer): 7, 423. • PBA: *Polskie Archiwum Biograficzne*: I S27, 389. • Poggendorff: 1, col. 417. • WBI.

1115. — French, 1714.

Traité | des | Metaux, | et | des Mineraux, | Et des Remedes qu'on en peut tirer; | Avec | Des Dissertations sur le Sel & le Soulfhre | des

CHAPMAN

Philosophes, & sur la Goute, la Gra- | velle, la
petite Vérole, la Rougeole & | autres Maladies:
avec un grand nombre de | Remedes choisis. | Par
M. Chambon, cy-devant premier | Médecin de Jean
Sobieski, Roy de Pologne. | [ornament] | A Paris,
Quay des Augustins, | Chez Claude Jombert, vis-
à-vis la Descente | du Pont-neuf, à l'Image Nostre
Dame. | [rule] | M. DCC. XIV. | Avec Approbation,
& Privilege du Roy.

12°: a⁸ ã⁴ i⁸ ð² A-Z^{8/4} Aa-Zz^{8/4}; 298ℓ.; [44], [1]-
547, [5] p. Headpieces, initials. Preliminary matter
includes several letters praising the medical remedies.

CONTENTS: [2 pgs], Half title page, "Suite | des |
Principes | de Physique, | Rapportés à la Médecine
pratique," verso blank.; [2 pgs], Title page, verso blank.;
[6 pgs], Dedication.; [16 pgs], Preface.; [18 pgs], Letters of
appreciation for Chambon's work.; [1 pg], Approbation.;
[1 pg], "Cession du Privilege."; [1]-547, Text.; [5 pgs],
"Table des Matieres."

VERY SCARCE. Chambon's text deals with the
medical uses of mineral substances, especially the
preparation of remedies. Information on the properties
and uses of minerals, other than medical, of many
substances like borax, alum, nitre, coffee, chocolate,
tea, tobacco, teeth, etc. are also discussed. A chapter
on gout and remedies to help reduce the inflammation
is also included.

Other issues & editions: Based on entries in other
bibliographies, the original text appears to have been
reissued several times. However, existence of some of these
books has not been confirmed. The *Wellcome Catalogue*, (2,
p. 324) lists an issue: Paris, C. Jombert 1750 (10 [11?]ll.,
547 p., 2ll.). A reported "Second Edition" of 1780 with
reportedly the same pagination as the 1714 appearance
is also likely to be a reprint, but no actual copy of this
edition has been located. Nicolas Gobet in his *Les Anciens
Minéralogistes du Royaume de France* (Paris, 1779) reprints
parts of Chambon's text.

REFERENCES: BL: [717.e.3.]. • Caillet, *Manuel*, 1912:
no. 2166. • Cole, *Chemical Literature*, 1988: no. 248. •
Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 129.
• Ferguson, *Bibliotheca Chemica*, 1906: 1, 150-1. • Hoover
Collection: no. 216. • NLM 18th Century Books (Blake):
p. 83. • Partington, *History of Chemistry*, 1961-70: 3, 65. •
Wellcome Catalog (Books): 2, 324 [1714 and 1750 editions].

CHANEL, Émile.

1116. — French, 1897.

Dictionnaire de géologie, étymologie, paléontologie,
minéralogie a l'usage des élèves des lycées et
collèges, des écoles normales primaires ... Par Emile
Chanel. Bourg, Imprimerie du "Courrier de l'Ain,"
1897.

8°: [8], 259, [1] p.

VERY SCARCE. A useful dictionary for French
geological and mineralogical terms and stratigraphic
units. It includes some historical references.

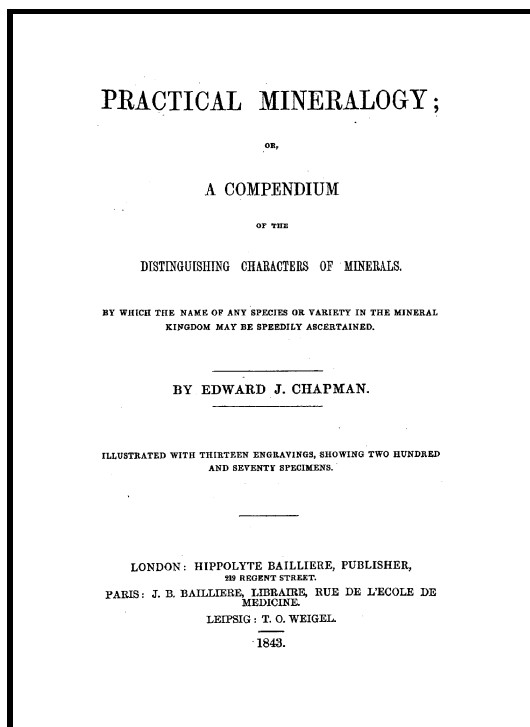
"Cet ouvrage a obtenu une médaille d'argent à
l'Exposition nationale et coloniale de Rouen, 1896."
"Extrait des Annales de la Société d'émulation de
l'Ain." "Ouvrages consultés," p. [7] of the preliminary
pages.

REFERENCES: BL. • NUC. • *USGS Library Catalog*.

CHAPMAN, Edward John. (BORN: Kent, England,
1821; DIED: Hampton Wick, near London, England, 28
January 1904) *English and Canadian mineralogist &
geologist*.

Chapman was educated in civil engineering in France
and Germany. He received a Ph.D. from Göttingen in
1862 and an LL.D. from Queen's University, Kingston
in 1867. He was professor of mineralogy in University
College, London from 1850 to 1853. In 1853 he went to
Canada to become the first professor of mineralogy and
geology at University College, Toronto. He held that post
until 1898 when he retired and subsequently returned to
England. From 1883, Chapman was a charter member of
the Royal Society of Canada. Besides many books and
papers concerned with geology and mineralogy, he also
authored a volume of poetry, *A Song of Charity* (1st ed.,
Toronto, 1857; 2nd ed., London, 1858).

REFERENCES: ABA: I 219, 414-416 & I 283, 140-
146. • Barr, *Index to Biographical Fragments*, 1973: 46.
• Cleavelly, *World Palæontological Collections*, 1983: 80. •
Dictionary of Canadian Biography: 131. • DNB: Suppl. 1901-
11, 352-3. • *Geological Magazine*: 1904, 144. • Lambrecht &
Quenstedt, *Catalogus*, 1938: 79. • Neffield, E.W. and D.E.
Blair, "Edward John Chapman 1821-1904. First Professor
of geology at the University of Toronto" (pp. 45-6, portrait),
in: Ludvigsen, R., ed., *Annual Report for 1977. Department
of Geology, University of Toronto*. Toronto, Dept. of Geology,
University of Toronto, 1977.. • Poggendorff: 1, col. 419,
3, 260-1 & 4, 239. • *Proceedings of the Royal Society of
Canada*: 1894. • Sarjeant, *Geologists*, 1980: 2, 714. • *Science*:
19 (1904), 358. • *University of Toronto Montly*: 1904. • WBI.



PRACTICAL MINERALOGY, 1843

1117. — English, 1843.

Practical Mineralogy; | Or, | A Compendium |

Of The | Distinguishing Characters Of Minerals. | By Which The Name Of Any Species Or Variety In The Mineral | Kingdom May Be Speedily Ascertained. | [rule] | By Edward J. Chapman. | [rule] | Illustrated With Thirteen Engravings, Showing Two Hundred | And Seventy Specimens. | [rule] | London: Hippolyte Bailliere, Publisher, | 219 Regent Street. | Paris: J.B. Bailliere, Libraire, Rue De L'Ecole De | Medicine. | Leipsig: T.O. Weigel. | [rule] | 1843.

4°: [i]-xvi, [2], [1]-192 p., 13 plates, [1]-41, [1] p. The 13 unnumbered plates all show crystal diagrams. PAGE SIZE: 225 x 140 mm.

CONTENTS: [i-ii], Title page, verso "London: | Printed By Charles Reynell, | Little Putteney Street."; iii, Dedication to Berzelius.; [iv], Blank.; [v]-xii, "Preface."—dated 5 September 1843.; xiii-xvi, "Contents."; [1 pg], "Postscript."; [1 pg], "Errata."; [1]-171, Text.; [172], Blank.; 173-192, "Index."; [13 plates].; [1]-41, Publisher's list.; [1 pg], Blank.

VERY RARE. This uncommon textbook is a manual of mineralogy designed for practical field work, and it is aimed towards students, prospectors and mine operators so that they might determine through field analysis the name of an unknown mineral. The text is divided into three major chapters: I. The distinctive characters of minerals. II. An artificial arrangement of simple minerals based on chemical and blowpipe characteristics (i.e. a combination of the classification systems of Mohs, Beudant and Berzelius). III. A natural arrangement of simple minerals. At the conclusion is a long index that was written to form a complete table of synonyms for all English, German, and French authors.

REFERENCES: BL: [1255.a.2.]. • Dana's 7th (Bibliography): 69. • NUC.

1118. — English, 1844.

Brief Description of Minerals. London, 1844.

8°: xi, 129 p., 3 plates. VERY SCARCE.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 222.

1119. — English, 1853.

A tabular distribution of the more commonly occurring minerals by means of which they may be easily recognized. drawn up for the use of his classes, by E.J. Chapman ... Toronto, Lovell & Gibson, 1853.

8°: 32 p. Printed wraps. Includes index. Title from front cover. VERY SCARCE.

REFERENCES: BL: [Mic.F.232]. • NUC.

1120. — English, 1880 [First edition].

Blowpipe practice. An outline of blowpipe manipulation and analysis, with original tables for the determination of all known minerals. by E.J. Chapman ... Toronto, Copp, Clark, 1880.

8°: xi, 292 p. Includes bibliographical references and index. VERY SCARCE.

REFERENCES: BL: [Mic.F.232]. • *Chemical News*: 40 (1880), p. 231. • NUC.

1121. 2nd edition, 1893: Blowpipe Practice: | [rule] | An Outline | Of | Blowpipe Manipulation And Analysis, | With Original Tables | For The | Determination Of Minerals. | [rule] | By | E.J. Chapman, | Ph.D., LL.D. | Professor Of Mineralogy And Geology In The University Of Toronto. | [rule] | Second Edition: Revised and Enlarged. | Toronto: | The Copp, Clark, Co., (Limited): 9 Front Street West. | 1893.

8°: [i]-ix, [1], [1]-308 p., illus.

CONTENTS: [i-ii], Half title page, "Chapman's | Blowpipe Practice | And | Mineral Tables," verso "Works | — By — | Professor E.J. Chapman, Ph.D. LL.D. | ..."; [iii-iv], Title page, verso "Entered according to Act of Parliament of Canada, ..."; [v]-vi, "Preface | To The First Edition."; vii-ix, "Contents."; [1], Blank.; [1]-74, "Qualitative Examination Of Mineral Bodies."; 75-96, "Appendix."; 97, Sectional title page, "Part II | ..."; 98, Blank.; 99-291, Text part II (tables I-XXVIII).; 292, Blank.; 293-294, Index Part I.; 295-308, "Index | To The Minerals In Part II."

SCARCE. The text is divided into two parts. The first provides an introductory sketch on the use of the blowpipe in qualitative mineral examination, including a very short history of the tool. The second consists of 28 tables with chemical and crystallographic notes used for the practical determination of minerals.

REFERENCES: BL: [Mic.F.232]. • NUC.

1122. — English, 1864 [First edition].

A Popular and Practical Exposition of the Minerals and Geology of Canada. Toronto, W.C. Chewett, 1864.

8°: xii, 236 p., 253 illus., including maps.

VERY SCARCE. A popular and practical exposition of the minerals and geology of Canada with over 250 woodcuts and a copious index. The majority of the work first appeared as a series of articles in the *Canadian Journal of Science and Art*, which presents a popular and full sketch of the mineralogy and geology of Canada. Introductory matter pertaining to both of these sciences render it a good handbook to the science as well. It provides in detail the general results of the Geological Survey of Canada, as it appeared in the published reports, together with additional data supplied by Chapman's own research.

REFERENCES: *American Journal of Science*: 2nd series, (1864), p. 432. • BL: [7108.aaa.16.]. • NUC.

1123. 2nd edition, 1871: The minerals and geology of central Canada comprising the provinces of Ontario and Quebec, with explanatory and technical observations on minerals, rocks and fossils generally: a hand-book for practical use. by E.J. Chapman ... 2nd ed., rev. and enlarged. Toronto, Copp, Clark, 1871.

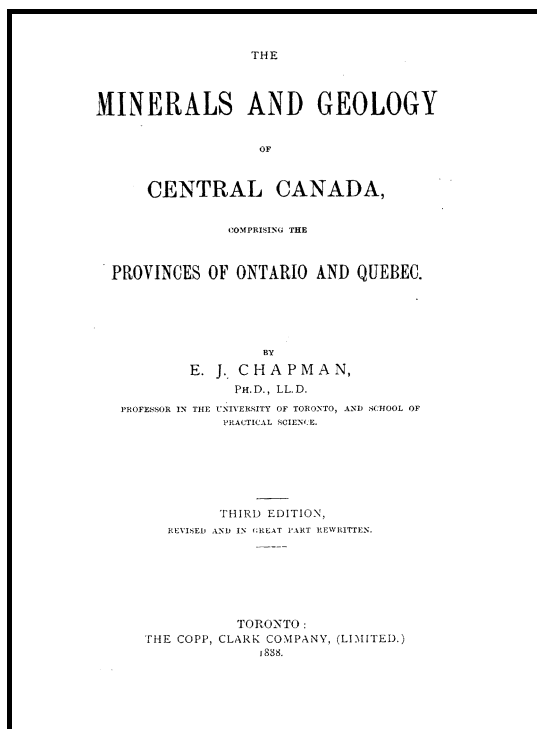
8°: VERY SCARCE.

REFERENCES: BL: [X29/5343]. • NUC. • *USGS Library Catalog*.

1124. 3rd edition, 1888: The | Minerals And Geology | Of | Central Canada, | Comprising The | Provinces Of Ontario And Quebec. | By E.J. Chapman, | [...3 lines of titles and memberships...] | [short rule] | Third edition, | Revised And In Great Part Rewritten. | [short rule] | Toronto: | The Copp, Clark Company, (Limited.) | 1888.

8°: [i]-x, [1]-371, [1] p. PAGE SIZE: 216 x 150 mm.

CONTENTS: [i-ii], Half title page, "Chapman's | Minerals And Geology | of | Ontario And Quebec," verso list of books by the same author.; [iii-iv], Title page, verso copyright information.; [v]-vi, "Preface."—dated 30



MINERALS AND GEOLOGY OF CANADA, 1888

April 1888.; [vii]-viii, "Contents."; [ix]-x, "Additions And Corrections."; [1]-354, Text.; 355, "Appendix." [=sequence of rock formations in the providences of Ontario and Quebec.]; [356], Blank.; 357-371, "Index."; [1 pg], Blank.

SCARCE. After a short introduction, the text, divided into five sections, is given. (1) The distinctive characters of minerals (pp. 3-48), including physical properties like streak, color, specific gravity, and chemical examination by reagents and the blowpipe; (2) The minerals of central Canada (pp. 49-146), lists mineral species according to a chemical classification grouping, and under each species the known localities are provided; (3) Rocks and rock-producing agents (pp. 147-208); (4) Fossilized organic bodies (pp. 209-292); (5) Systematic outline of the geology of central Canada, comprising the providences of Ontario and Quebec (pp. 293-354); At the conclusion is an Appendix (p. 355) and Index (pp. 357-371).

REFERENCES: BL: [7106.f.24]. • NUC. • *USGS Library Catalog*.

1125. — English, 1884 [First edition].

The Mineral Indicator: a Practical Guide to the Determination of Generally-Occurring Minerals. Toronto, Copp Clark, 1884.

16°: 118 p. VERY SCARCE.

REFERENCES: BL: [Mic.F.232]. • NUC.

1126. 2nd edition, 1893: The mineral indicator. a practical guide to the determination of generally-occurring minerals. By E.J. Chapman ... 2nd edition. Toronto, Copp, Clark, 1893.

8°: [i]-vi, 7-124 p. VERY SCARCE.

REFERENCES: NUC.

1127. — English, 1904.

Mineral Systems | A Review | With Outline Of

An Attempted | Classification Of Minerals | In Natural Groups | By | E.J. Chapman, Ph.D. | [...2 lines of titles and memberships...] | London | Williams And Norgate | 14, Henrietta Street, Covent Garden | 1904.

8°: [10], 144 p. Includes index.

VERY SCARCE. Apart from certain questions bearing more or less directly on the subject, the present Essay concerns itself entirely with the Classification of Minerals. It is not intended to serve in any way as an introduction to the actual study of Mineralogy: nor, indeed, can its argument be properly understood except by those who have already some knowledge of the subject to which it refers. It is published as a protest against the system of classification now so greatly in vogue, by which Mineralogy is practically dethroned as a natural science; and secondly, in the hope that it may induce some of our younger workers in this field of research to develop, sooner or later, a truly natural system that may be acceptable to all. The writer's own day has gone by for this. The inevitable "Thus far and no farther" that awaits the coming years of all, is, in his case wellnigh reached. In his discussion of past and present classifications, he is constrained, it will be seen, to differ somewhat widely from the views and opinions of others: but, in contesting these views, he has striven to do so without undue discourtesy. — *Preface*.

Contents: I. A Brief Review of the More Important Mineral Systems. II. Classification Characters in Mineralogy. Appendix A. Synopsis of a Proposed Distribution of Minerals in Consecutive Natural Groups. Appendix B. Characteristic Blowpipe Reactions. Index.

REFERENCES: BL: [7106.e.22]. • NUC.

CHAPMAN, S.H.

See: Dohrmann, Adolph.

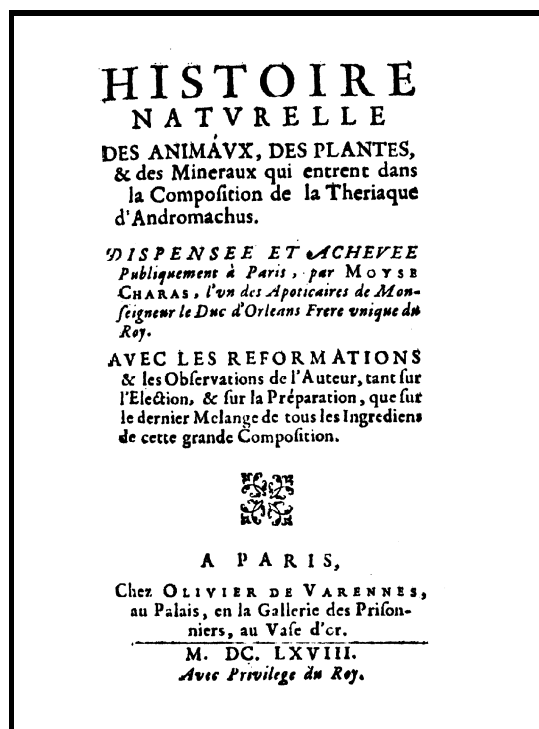


CHARAS

CHARAS, Moïse. (BORN: Uzès, Languedoc, France, 1618; DIED: Paris, France, 17 January 1698) *French physician & apothecary*.

Charas was the demonstrator for chemistry at the Jardin de Royale (Botanical Gardens). He was a member of the Paris Academy of Sciences.

REFERENCES: ABF: I 206, 227-240. • *Biographie Universelle*. • Felix, F.W., "Moyse Charas, maître apothicaire et docteur en médecine (Uzès 1619-Paris 1968)," *Revue d'Histoire de la Pharmacie*, 50 (2002), no. 333, p. 63-80. • Feller, *Biographie Universelle*, 1851. • *Jewish Biographical Archive*: 175, 325-329 / S26, 204. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, 421. • Schwarz, H.-D., "Zum 300 Todestag von Moyse Charas," *Deutsche Apotheker Zeitung*, Jahrg. 138 (1998), Nr. 4, p. 250-1. • WBI.



HISTOIRE NATVRELLE, 1668

1128. — French, 1668.

Histoire | Natvrelle | Des Animaux, Des Plantes, | & des Minéraux qui entrent dans | la Composition de la Theriaque | d'Andromachus | Dispensee Et Achevee | Publiquement à Paris, par Moyse | Charas, l'vn des Apoticaire de Mon- | seigneur le Duc d'Orleans Frere vnique du | Roy. | Avec Les Reformati- | ons & les Observations de l'Auteur, tant sur | l'Electi- | on, & sur la Préparation, que sur | le dernier Melange de tous les Ingrediens | de cette grand Composition. | [ornament] | A Paris, | Chez Olivier de Varennes, | au Palais, en la Gallerie des Prison- | niers, au Vase d'or. | [rule] | M. DC. LXVIII. | Avec Privilege du Roy.

12°: xxviii, 310, [9] p., frontispiece. VERY SCARCE. REFERENCES: BL: [234.a.1.]. • BMC: 1, 337.

1129. 1691: Histoire naturelle des animaux, des plantes, & des minéraux qui entrent dans la composition de la Theriaque d'Andromachus ... Avec les reformati- | ons & les observations de l'auteur, tant sur l'élection, & sur la préparation, que sur le dernier melange de tous les ingrediens de cette grand composition. Theriaque d'Andromachus ... Nouvelle édition, revuë & augmedté [sic]. Paris, L. d'Houry, 1691.

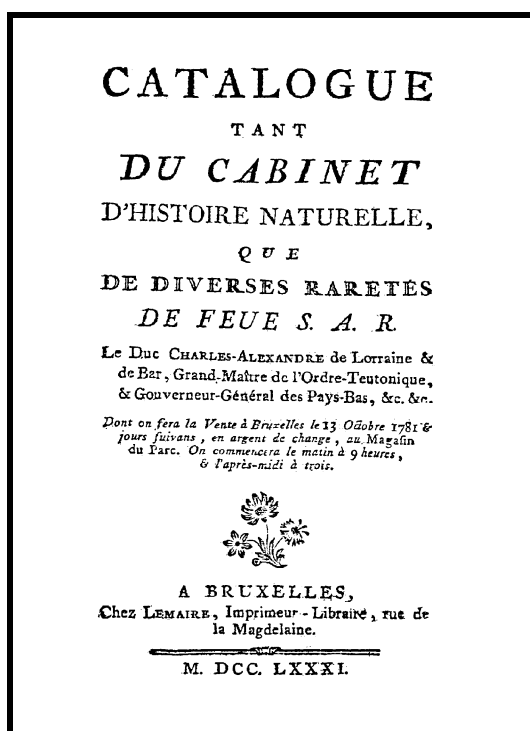
8°: 305 p. With an additional engraved titlepage. VERY SCARCE.

REFERENCES: BL: [957.i.33.].

CHARLES ALEXANDRE. (BORN: 1712; DIED: 1780)

French aristocrat.

Charles Alexander, Prince of Lorraine, Governor General of the Low Countries, and brother-in-law of Empress Maria Theresa.



CATALOGUE, 1781

1130. — French, 1781 [Sale catalog].

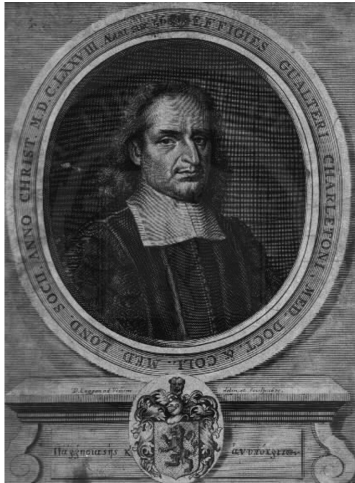
Catalogue | Tant | Du Cabinet | D'Histoire Naturelle, | Que | De Diverses Raretés | De Feu S.A.R. | Le Duc Charles-Alexandre de Lorraine & | de Bar, Grand-Maitre de l'Ordre-Teutonique, | & Gouverneur-Général des Pays=Bas, &c. &c. | Dont on fera la Vente à Bruxelles le 13 Octobre 1781 & | jours suivans, en argent de change, au Magasin | duParc. On commencera le matin à 9 heures, | & l'après-midi à trois. | [ornament] | A Bruxelles, | Chez Lemaire, Imprimeur-Libraire, rue de | la Magdelaine. | [ornate rule] | M. DCC. LXXXI.

8°:

CHARLETON

RARE. Auction sale catalog of a royal mineral collection. Housed at his residence in Bruxelles, the collection contained minerals, fossils, petrifications, and numbered 4,480 mineral and rock specimens, including 650 copper species, 354 gold specimens, and 257 examples of lead ores. Sold in 1781, a portion became the nucleus of the Belgian Institute of Natural History in Bruxelles.

REFERENCES: Wilson, *History of Mineral Collecting*, 1994: 114-5 & 209.



CHARLETON

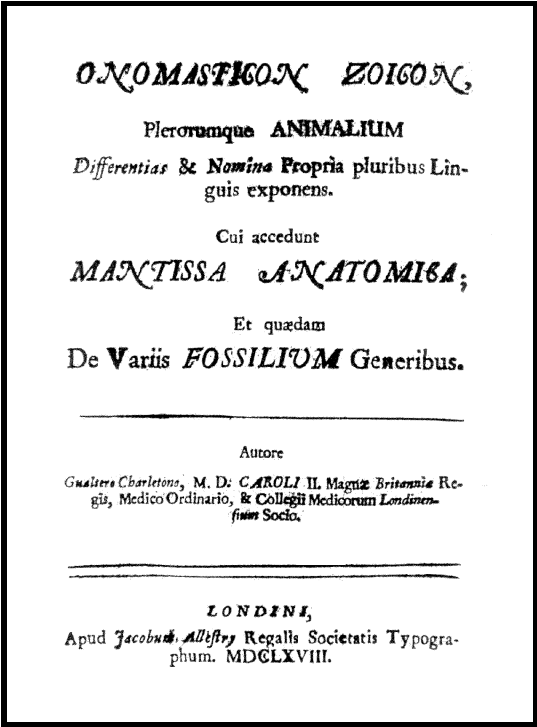
CHARLETON, Walther. (BORN: Shepton Mallet, Somerset, England, 13 February 1619; DIED: London, England, 6 May 1707) *English physician & naturalist.*

Charleton received early education at home. He entered Oxford University, 1635; awarded degree of doctor of physick, 1643; considered an extraordinary genius during his lifetime, he turned his talents to writing about a variety of subjects including Stonehenge, Epicurean ethics, and medical topics; his importance as a scientist rests on "his role as expositor of the atomic philosophy in a period during which its reception as a viable doctrine was in doubt" (DSB); original founding member of the Royal Society of London; member of Royal College of Physicians, 1676.

REFERENCES: DNB: 4, 116-9. • DSB: 3, 208-210 [by Robert Kargon]. • Fleitmann, S., *Walter Charleton (1620-1707), "Virtuoso": Leben und Werk.* Frankfurt am Main, Lang, 1986. 478 p. [Published as: *Aspekte der englischen Geistes- und Kulturgeschichte*, vol. 7.]. • Golden, S.A., "Dryden's praise of Dr. Charleton," *Hermathena: A Dublin University Review*, 103 (1966), 59-65. • Osler, M.J., "Descartes and Charleton on nature and God," *Journal of the History of Ideas*, 40 (1979), 445-56. • Rolleston, H., "Walter Charleton, D.M., F.R.C.P., F.R.S.," *Bulletin of the History of Medicine*, 8 (1940), 403-16. • Sharpe, L., "Walter Charleton's Early Life, 1620-1659, and Relationship to Natural Philosophy in Mid-Seventeenth Century England," *Annals of Science*, 30 (1973), 311-40.

1131. — Latin, 1668 [First edition].

Onomasticon Zoicon, | Plerorumque Animalium | Differentias & Nomina Propria pluribus lin- | guis exponens. | Cui accedunt | Mantissa Anatomica; | Et quædam | De Variis Fossilivm Generibus. |



ONOMASTICON ZOICON, 1668

[rule] | Autore | Gualtero Charletono, M.D. Caroli II. Magnæ Britanniae Re- | gis, Medico Ordinario, & Collegii Medicorum Londinen- | siuns Socio. | [double rule] | Londini, | Apud Jacobum Allestry Regalis Societatis Typogra- | phum. MDCLXVIII.

4°: $\pi^3 a^4 b^2 A^1 B-Xx^4 Yy^1$; 182ℓ.; [20], 1-309, [1], [34] p., 9 leaves of plates (1 folded; showing birds). Indexes: p. [1]-[34] at end.

CONTENTS: [2 pgs], Title page, verso blank.; [14 pgs], "Præfatio."; [1 pg], "Typographus | Erudito Lectori."; [1 pg], Two quotations in Greek.; [1 pg], Sectional title page, "[rule] | Qualteri Charletoni | Onomastico Zoicon. | [rule]."; [1 pg], "5to Junii 1668 | ..."; 1-34, Text of animals.; [35], Blank.; 36-59, Text of insects.; [60], Blank.; 61-117, Text of birds.; [118], Blank.; 119-191, Text of fishes.; [192], Blank.; 193-213, Text of Zoophytorum.; [214], Sectional title page, "De Variis | Fossilium | Generibus."; [215], Sectional title page, "De Variis | Fossilium | Generibus."; [216], Blank.; 217-309, Text of fossils.; [1 pg], Blank.; [34 pgs], "Index."

VERY SCARCE. *Onomasticon Zoicon*, the title of this important and celebrated natural history classic means a dictionary of living things. It is a work of natural taxonomy, and Charleton gives the English, Latin and Greek names of all manner of natural things. It is the first English book to provide illustrations of the English birds it describes. In addition to listings of quadrupeds, insects, birds and fish, the text includes in the third and final section an early and important list of fossils.

In Charleton's time, fossil referred to anything dug from the earth, and consequently many of the

descriptions are of minerals and precious stones. Among those fossils listed are fossilized fish and shells, agate, chalcedony, sardonyx, diamond, bezoar stone, carbuncle, garnet, sapphire, emerald, gold, silver, copper, tin, iron. Under a heading of mixed metals mention is made of galena, pyrite, chrysocholla, minum, and various lead spars.

REFERENCES: BL: [462.a.9.]. • Garrison & Morton: 292. • Jackson, *Bird Etchings*, 1985: p. 26. • Mullens & Swann, *Ornithology Bibliography*, 1917: 125. • Norman Catalog: no. 461. • Roller & Goodman, *Catalogue*, 1976: 1, 224. • Wellcome Catalog (Books): 2, 329. • Wing: C-3688. • Wood, *Literature of Vertebrate Zoology*, 1931: 287.

1132. Reissue, 1671: *Onomastikon zoikon continens plerumque animalium quadrupedum, serpentium, insectorum, avium & piscium differentias, eorumque nomina propria diversis linguis exposita, cui accedunt mantissa anatomica, et nonnulla de variis fossilium generibus, cum figuris.* London, Apud Jacobum Allestry ..., 1671.

4^o: [18], 309, [36] p., [5] leaves of plates. At head of title: Gualteri Charletoni M.D. Caroli II. Magnae Britanniae regis, medici ordinarii, & Collegii Medicorum Londinensium socii. Index: p. [1]-[35] at end. VERY SCARCE.

REFERENCES: BL: [1489.b.26.].

1133. 2nd edition, 1677: *Gualteri Charletoni | Exercitationes | De | Differentiis & Nominibus Animalium. | Quibus accedunt | Mantissa Anatomica, | Et quaedam | De variis Fossilium generibus, | Deque differentiis & nominibus Colorum. | Editione secunda, duplo, fere auctior priori, novisque iconibus ornata. | [Large ornamental rectangular scene] | Oxoniae, | E Theatro Sheldoniano, An. Dom. 1677.*

3 parts (bound in 1 volume). [Part 1] 2^o: a-e², A-Gg²; 70l.; [20], [1]-119, [1] p., large engraved title-vignette, 3 engraved plates. [Part 2] 2^o: a*-dd*²; 53l.; [1]-106 p., with 3 engraved plates and 5 engraved figures in the text. [Part 3] 2^o: Aa-Aaa²; 50l.; [2], [1]-78, [20] p. PAGE SIZE: 220 x 355 mm.

CONTENTS: [Part 1] [2 pgs], Title page, verso blank; [6 pgs], Dedication; [11 pgs], "Praefatio."—dated M DC LXVII [=1677]; [1 pg], Two quotations in Greek; 1-31, Text of animals; 32-35, Text of snakes; 36-63, Text of insects; 64-119, Text of birds; [1 pg], Blank.

[Part 2] 1-67, Text of fishes; 68-69, Text of zoophyta; [70], Blank; 71-106, Text of Mantissa Anatomica.

[Part 3] [1 pg], Sectional title page, "De Variis | Fossilium | Generibus."; [1 pg], Blank; 1-78, Text of fossils; [3 pgs], "Addenda."; [1 pg], Blank; [15 pgs], "Index."; [1 pg], Blank.

VERY SCARCE. Second edition, substantially enlarged, with much of the work new and in every part improved and additionally illustrated. The change to the larger folio size from the quarto of the 1668 edition provided more descriptive space for Charleton and he makes good use of it. This is a truly splendid volume. The text flows along the lines of the earlier edition, but with the addition of an appendix, 'Colorum Differentiis et Nominibus.' This remarkable section which only appears in this edition, classifies various shades of colors by their English and Latin names. For example, there are 11 shades of white, 18 of yellow and 16 of red.

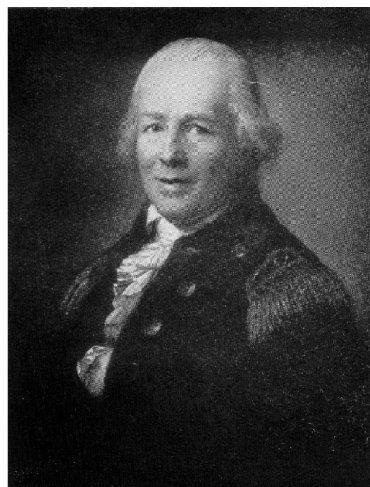
REFERENCES: BL: [37.g.13.]. • Lowndes, *Bibliographer's Manuel*, 1857-64: 422. • Madan, *Oxford Books*, 1895-1931: no. 3137. • Nissen (ZBI): 872. • Roller & Goodman, *Catalogue*, 1976: 1, 223. • Wing: C-3672. • Wood, *Literature of Vertebrate Zoology*, 1931: 287.

1134. Quarto reissue?, 1677: *Onomasticon zoicon, plerumque animalium differentias & nomina propria pluribus linguis exponens. Cui accedunt mantissa anatomica; et quaedam de variis fossilium generibus. Editio secunda, duplo fere auctior priori, novisque iconibus ornata.* Oxoniae Theatro Sheldoniano, 1677

4^o: [18], [2], 214, [2], 215-310, [36] p., 8 excellent engraved plates (6 folding), 5 of which depict birds. Four engraved illustrations in the text, including a full-page illustration of a bird. Addenda: p. [1]-[2] at end. Delenda: p. [2] at end. Errata: p. [2]-[3] at end. Index: p. [5]-[19] at end.

VERY SCARCE. Apparently a quarto sized issue of the second edition, with the title reverting to something reminiscent of the *Onomasticon Zoicon* first edition of 1668. There seem to be several issues of Charleton's work though none of the standard sources describe it as such.

REFERENCES: BL: [435.h.10.]. • Hoover Collection: no. 218. • LKG: III 55. • Nissen (ZBI): 872 [wrong collation?]. • Wing: 3688.



CHARPENTIER

CHARPENTIER, Johann Friedrich Wilhelm von. (BORN: Dresden, Germany, 1728; DIED: 1805) *German geologist.*

REFERENCES: ADB: 4, 105. • *Catalogue of Portraits of Naturalists*: 277 [1 portrait listed]. • Engewald, Gisela-Ruth. "Einige Gedanken zum Erscheinen der ersten farbigen petrographischen Karte Sachsens von Johann Friedrich Wilhelm von Charpentier vor 200 Jahren", *Zeitschrift für geologische Wissenschaften*, 8 (1980), no. 2, 159-69, 5 illus. • Lambrecht & Quenstedt, *Catalogus*, 1938: 80. • NDB: 3, 193 [by E. Krenkel]. • Poggendorff: 1, cols. 422-3. • Sarjeant, *Geologists*, 1980: 2, 717 & Suppl. 2, (1995), 1, 502.

1135. — German, 1771.

Bergwerkscharte von dem mittägigen Theile der Gebirge im Bergamtsreviere Marienberg etc. nebst Erklärung derselbe. von F.W.H. von Trebra. Annaberg., 1771.

8^o: RARE.

REFERENCES: LKG: XIV 220.

1136. — German, 1778 [First edition].

Mineralogische Geographie | der | Chursächsischen Lande | von | Johann Friedrich Willhelm Charpentier, | [...6 lines of titles and memberships...] | Mit Kupfern. | [vignette] | [ornate rule] | Leipzig 1778. | Bey Siegfried Lebrecht Crusius.

CHENEVIX

4^o: π^3 b-e⁴ f² A-Kkk⁴ Lll¹; ??ℓ..; [i]-xliv, [i]-xvi, [1]-432, [2] p., frontispiece, engraved title page, one hand colored map of the "Kupferstich," 6 plates. PAGE SIZE: 245 x 208 mm.

CONTENTS: [i-ii], Frontispiece, verso blank.; [iii-iv], Title page, verso "Non singendum aut excogitandum, ..."; [v], Dedication to Freidrich August.; [vi], Blank.; [vii]-x, Text of dedication, signed Johann Friedrich Wilhelm Charpentier, 10 June 1778.; [xi]-xxvi, "Vorrede.;" [xxvii]-xliv, "Inhalt.;" xliii-xliv, "Erklärund der Kupfer.;" [i]-xvi, "Einleitung.;" [1]-432, Text.; [2] pgs, "Druckfehler."

PLATES: Plates and map are as follows: Frontispiece showing Greek(?) gods. Folding colored map of the "Kupferstich." (376 x 550 mm.) 1. Underground mining scene. 2. Underground mining scene. 3. Saxony topaz locality (north view). 4. [same] (south view). 5. [same] (another view). 6. [same] (another view).

VERY SCARCE. A classic text in the early geological literature of Germany. The *Mineralogische Geographie* gives an excellent description of the veins and other mineral occurrences of Saxony and some of the adjacent areas, and in the last few pages of the book the question of the probable origin of the ores is discussed. It is an admirable presentation of the facts gathered during the author's long years of mining experience. He considers in succession those facts which have a definite bearing on the question of the genesis of the ore deposits, and, based on them, he offers an explanation of their origin, which, he says, cannot be considered as more than a conjecture but which he believes represents the closest approximation to the truth attainable at that time.

Next to G. Gläser and the map that appeared in his *Versuch einer mineralogischen Beschreibung* (1775) the map of Saxony in Charpentier's book is the earliest colored geological map of Germany. He uses eight tints to distinguish granite, gneiss, schist, limestone, gypsum, sandstone, river sand, clay and loam. He uses symbols to show the location of basalt, serpentine, etc.

REFERENCES: Adams, *Birth and Development*, 1938: p. 313. • Cotta, B.v., *Beiträge zur Geschichte der Geologie*: p. 27-28. • Engewald, Gisela-Ruth. "Einige Gedanken zum Erscheinen der ersten farbigen petrographischen Karte Sachsens von Johann Friedrich Wilhelm von Charpentier vor 200 Jahren", *Zeitschrift für geologischen Wissenschaften*, 8 (1980), no. 2, 159-69, 5 illus. • *Freilich Sale Catalog*: no. 125. • Geikie, *Founders of Geology*, 1905: p. 452. • Hoover Collection: no. 220. • *Katalog Bergakademie Freiberg*, 1879: p. 125. • LKG: XIV 200. • Reichardt, *Bibliotheca Rerum Metallicarum*, 1857: I 34. • Sinkankas, *Gemology Bibliography*, 1993: no. 1254. • Ward & Carozzi, *Geology Emerging*, 1984: no. 475. • Zittel, *Geschichte der Geologie*, 1899: p. 38.

1137. — German, 1799.

Beobachtungen | Über Die | Lagerstätten Der Erze | Hauptsächlich Aus Den Sachsischen Gebirgen. | [rule] | Ein Beitrag Zur Geognosie | Mit Kupfern. | Von | Johann Friedr. Wilhelm Von Charpentier, | [...7 lines of titles and memberships...] | [rule] | Leipzig, ... 1799.

8^o: x, 206 p., [7] leaves of plates.

VERY SCARCE. Elaboration of the theories and ideas presented in the author's *Mineralogische Geographie der Chursächsischen Lande* (Leipzig, 1778)

[see previous item].

REFERENCES: Adams, *Birth and Development*, 1938: p. 313. • *Freilich Sale Catalog*: no. 126. • LKG: XIII 217. • Ward & Carozzi, *Geology Emerging*, 1984: no. 476.

1138. — German, 1804.

Beitrag zur geognostischen Kenntniss des Riesengebirges Schlesischen Antheils von I.F.W. von Charpentier. Leipzig, 1804.

8^o: RARE.

REFERENCES: LKG: XIV 310.



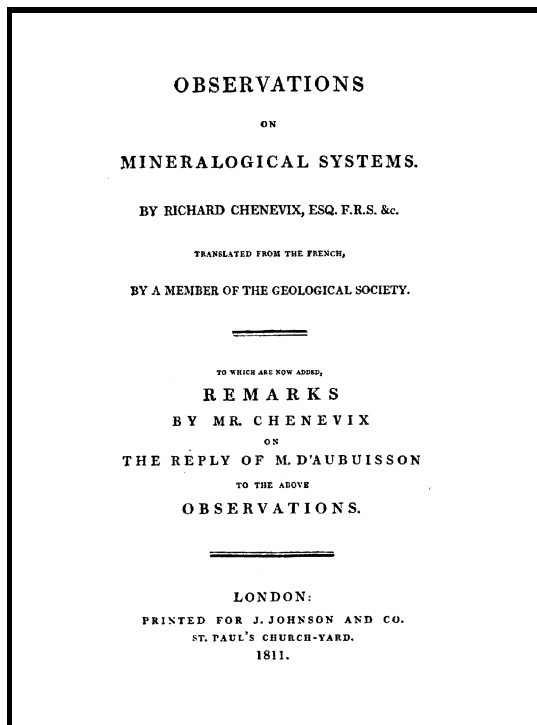
CHENEVIX

CHENEVIX, Richard. (BORN: Ballycommon, near Dublin, Ireland, 1774; DIED: Paris, France, 5 April 1830) *Irish chemist & mineralogist.*

Of Huguenot ancestry, Chenevix was educated at the University of Glasgow. Soon thereafter, in 1801, he published an analysis of a new variety of lead ore [=anglesite] and of various arsenates of copper. The publication of *Remarks upon Chemical Nomenclature, According to the Principles of the French Neologists* (London, 1802) built him a reputation as an expert in the field. In this same time, he also built a reputation for viciously attacking the German school of Naturphilosophie, which won him some enemies. In 1803, an anonymous handbill was circulated among British scientists. It announced the discovery of a new chemical element called palladium. Chenevix, believing the substance to be a complex alloy purchased the entire stock and began experimenting. Subsequently, he reported to the Royal Society that palladium was simply a mixture of platinum and mercury. Soon after, Wollaston announced himself the author of the handbill and discoverer of two new elements, palladium and rhodium. After it was shown that these were infact new elements, Chenevix's reputation was badly damaged. Subsequently, he emigrated to France, where he became a disciple of Haüy. In later years, Chenevix wrote several novels, plays, and books of poems. He was a Fellow of the Royal Society of London.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • Barr, *Index to Biographical Fragments*, 1973: 48. • BBA: I 225, 172-180; II 1381, 369. • Dean, P.A.W., "The 'synthetic' palladium of Richard Chenevix: A verdict on the chemist and the chemistry," *Ambix: Journal of the Society for the History of Alchemy and Chemistry*, 26 (1979), 100-115. • *Dictionary of Irish Biography*. • DNB. • DSB:

3, 232-3 [by H.A.M. Snelders]. • Hayes, R., *Biographical dictionary of Irishmen in France*. Dublin, 1949. • *ISIS*, 1913-65: 1, 250. • Poggendorff: 1, cols. 428-9. • Reilley, D., "Richard Chenevix (1774-1830) and the Discovery of Palladium," *Journal of Chemical Education*, **32** (1955), 37-9. • Usselman, M.C., "The Wollaston-Chenevix controversy over the elemental nature of palladium: A curious episode in the history of chemistry," *Annals of Science*, **35** (1978), 551-579. • WBI. • Webb, *Compendium of Irish Biography*, 1878. • White, A.M. and H.B. Friedman, "On the Discovery of Palladium," *Journal of Chemical Education*, **9** (1932), 236-45. • *World Who's Who in Science*: 326.



OBSERVATIONS, 1811

1139. — English, 1811.

Observations | On | Mineralogical Systems. | By Richard Chenevix, ESQ. F.R.S. &c. | Translated From The French, | By A Member Of The Geological Society. | [double rule] | To Which Are Now Added, | Remarks | By Mr. Chenevix | On | The Reply Of M. D'Aubuisson | To The Above | Observations. | [double rule] | London: | Printed For J. Johnson And Co. | St. Paul's Church-Yard. | 1811.

8°: π^4 B-K⁴ L²; 74 ℓ .; [i]-viii, [1]-138, [2] p. PAGE SIZE: 230 x 140 mm.

CONTENTS: [i-ii], Half title page, "Observations | On | Mineralogical Systems," verso "Printed by C. Wood, | Poppin's Court, Fleet Street, London."; [iii-iv], Title page, verso blank. [v]-viii, "Advertisement | Of The Translator."; 1-124, Text.; [125]-138, "Remarks | upon an | Answer of M.^r D'Aubuisson | To The | Preceding

Observations."; [1 pg], "Printed by C. Wood, | Poppin's Court, Fleet Street, London."; [1 pg], Blank.

VERY SCARCE. First separate edition. Originally published as "Suite des Réflexions sur quelques méthodes minéralogiques," in the *Annales de Chemie* [see: **65** (1808), pp. 225-276], when Chenevix returned to England he was asked to prepare a translation. He declined, but offered assistance to anyone that would be willing to pursue the work. A member of the Geological Society [who??] took up the challenge, and work on the translation began. However, about the time the manuscript was ready for the press, another translation began appearing in serialized form in the *Philosophical Magazine* [see: ?? (18??) pp. ???-???]. This almost derailed the publication of the *Observations*, but it was decided that the other translation was inadequate, and so publication proceeded, although it would appear that not many copies were printed.

The text takes the form of a point/counter-point discussion of the merits between the mineralogical theories of Haüy and Werner. Although purporting to be objective in its discussion, Chenevix is prejudiced to the Haüyian view of mineralogy. An additional section has been included where Chenevix rebuts the criticisms of D'Aubuisson, a Werner disciple, against the original article.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 132. • NUC.

CHESTER, Albert Huntington. (BORN: Saratoga Springs, New York, U.S.A., 22 November 1843; DIED: New Brunswick, New Jersey, U.S.A., 13 April 1903) *American mineralogist & chemist.*

Chester studied at Union College before entering the Columbia School of Mines from which he graduated in 1868. Upon the recommendation of T. Egleston, he was appointed professor of chemistry, mineralogy and metallurgy at Hamilton College, New York, where he remained from 1870 to 1890. Chester then took a position as professor of chemistry and mineralogy at Rutgers College in 1891, where he remained until his death.

REFERENCES: ABA: I 290, 163-171. • Barr, *Index to Biographical Fragments*, 1973: 48. • Elliott, *Biographical Index*, 1990: 41. • Elliott, *Biographical Dictionary*, 1979: 52. • *National Cyclopaedia of American Biography*: 11, 422-3. • Poggendorff: 3, 266 & 4, 244. • WBI.

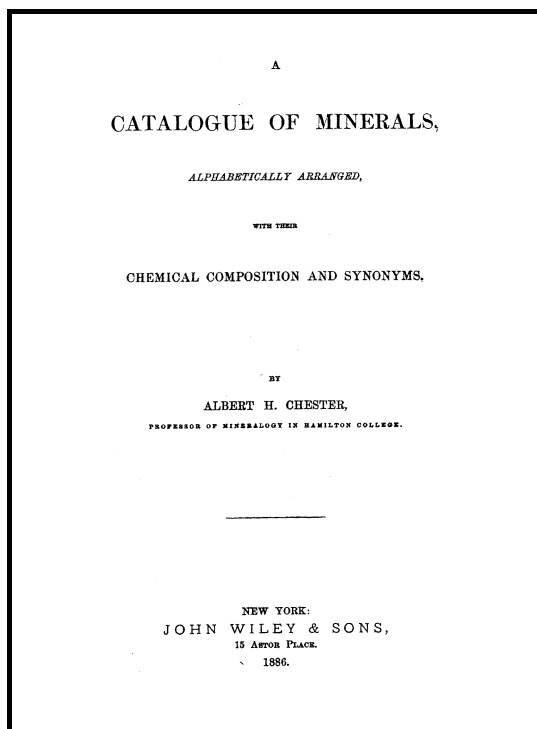
1140. — English, 1886 [First edition].

A | Catalogue Of Minerals, | Alphabetically Arranged, | With Their | Chemical Composition And Synonyms. | By | Albert H. Chester, | Professor of Mineralogy in Hamilton College. | [rule] | New York: | John Wiley & Sons, | 15 Astor Place. | 1886.

8°: [4], [1]-52 p. PAGE SIZE: 234 x 148 mm.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1886, by John Wiley & Sons."; [1 pg], "Note."— dated 1 July 1886.; [1 pg], Blank.; [1]-52, Text.

VERY SCARCE. A small mineralogy intended to list in alphabetical sequence all the English names then used in the nomenclature of mineralogy. Included are species, varieties, and synonyms. Obsolete names have been omitted, so that the work can be used as a



CATALOGUE OF MINERALS, 1886

check list in cataloging mineral collections. The two subsequent editions show the acceptance of this work.

REFERENCES: NUC.

1141. 2nd edition, 1892: A Catalogue of Minerals, Alphabetically Arranged. With Their Chemical Composition and Synonyms. Second edition, revised. By Albert H. Chester ... New York, John Wiley & Sons, 1892.

8°: [4], [1]-52 p. PAGE SIZE: 234 x 148 mm. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1886, 1892 by John Wiley & Sons."; [1 pg], "Note."; [1 pg], Blank.; [1]-52, Text.

1142. 3rd edition, 1897: A | Catalogue Of Minerals | Alphabetically Arranged | With Their | Chemical Composition And | Synonyms | By | Albert H. Chester | Professor of Mineralogy in Hamilton College; now of Rutgers College | Third Edition | First Thousand | New York: | John Wiley & Sons, | London: Chapman & Hall, Limited. | 1897.

8°: [4], [1]-56 p. PAGE SIZE: 230 x 148 mm.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1886, by John Wiley & Sons. —Copyright, 1897 by Albert H. Chester."; [1 pg], "Note."—last dated 1 June 1897.; [1 pg], Blank.; [1]-56, Text.

VERY SCARCE. From the Note: "In this Third Edition, which has been carefully revised and entirely reset, all names added to the nomenclature of the science up to its date have been inserted in the proper order, and it is believed that it is now the most convenient check list for the use of mineralogists."

1143. — English, 1896.

A Dictionary | Of The | Names Of Minerals | Including | Their History And Etymology | By | Albert Huntington Chester | E.M. Ph.D. Sc.D. |

Professor of Mineralogy in Rutgers College | First Edition | First Thousand | New York: | John Wiley & Sons. | London: Chapman & Hall, Limited. | 1896.

8°: [i]-xxxviii, [1]-320, [2], 1-16 p. PAGE SIZE: 220 x 148 mm.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso copyright notice.; [v], Dedication to Edward North.; [vi], Blank.; vii-xv, "Introduction."—signed Albert H. Chester, 1 January 1896.; xvi-xvii, "Correspondents."; [xviii], Blank.; xix-xxxvii, "Abbreviated And Full Titles Of The Works Cited."; xxxviii, "Abbreviations."; [1]-296, Text.; [297]-320, "Index To The Authors Of Mineral Names."; [2 pages], Blank.; 1-16, "Short Catalogue Of The Publications Of John Wiley."

SCARCE. A valuable compilation to the history of mineralogical nomenclature. Besides describing the difficulties in compiling a work of this type, Chester in the introduction provides a highly interesting essay on the history of mineralogical names. The long lists of correspondents and cited references reflect the careful, patient labor the author exercised in compiling this book, the most comprehensive history of the names of minerals ever published. The text lists in an alphabetical sequence nearly five thousand names that have been applied to minerals. Included are minerals still considered actual species, as well as those that are varieties or that have through history become discredited or had the priority for their name, given to another researcher. All except about one hundred and fifty entries contain a complete reference to the original authority and a derivation of the the names meaning. At the conclusion of the text there is a very useful index to the various mineralogists that have named minerals contained within the body.

REFERENCES: *American Journal of Science*: 4th Series, 1 (1896), 401. • Dana's 7th (Bibliography): 69.



CHIARUGI

CHIARUGI, Vincenzo. (BORN: Empoli, Italy, 20 February 1759; DIED: Florence, Italy, 20 December 1820) *Italian physician & dermatologist.*

Chiarugi received his medical degree from the University of Pisa in 1780. He practiced medicine in Florence, becoming the personal physician to Achispedoli of St. Maria Nuova. In 1785, he was appointed director of a new mental hospital recently built in Florence. He was named professor of skin and mental diseases of Santa Maria Nuova in 1802, becoming superintendent in 1818. Chiarugi is considered the father of Italian clinical psychiatry. He was the first in Europe to stop using chains and fetters in treating the insane, instead developing new methods and reforming the old methods.

REFERENCES: ABI: I 290, 401-427. • *Biographie Universelle*. • Capparoni, *Profilo Bio-Bibliografico*, 1928-32: 2, 123-5, portrait. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Dizionario Biografico Italiani*: 24, 609-14. • Mieli, *Gli Scienziati Italiani*, 1921: 1, 40-1, portrait. • *Nouvelle Biographie Générale* (Hoefer). • WBI. • *World Who's Who in Science*: 328.



SISTEMA DI MINERALOGIA, 1780

1144. — Italian, 1780.

Sistema | Di | Mineralogia | Compilato
Recentemente | Per Uso | Dei Moderne Gabinetti
| Di Storia Naturale. | [ornament] | In Firenze
MDCCLXXX. | [ornate rule] | Nella Stamperia
Allerini Alla Croce Rossa | Con Approvazione.

16°: vi, 62 p.

RARE. Although this title was published anonymously, it is generally attributed to be the work of Chiarugi. It is a treatise of mineralogical classification designed for use by the late eighteenth century collector of minerals. The text is based upon the natural history method, then prevailing throughout the science, and

consists of a synopsis of the classification scheme. From the text it is inferred that the author had classified his own mineral collection according to the outlined method.

REFERENCES: LKG: XII 80. • NYPL Catalog.

CHILDREY, Joshua. (BORN: Rochester, Kent, England, 1623; DIED: Upwey, Dorsetshire, England, 26 August 1670) *English naturalist*.

Childrey graduated from Oxford University; Magdalen College, B.A., 1646. Childrey was expelled by the Parliamentary Visitors in 1648. M.A., 1661; D.D., 1661. Both of these degrees were mandated upon the Restoration. Childrey's first books were on astrology: *Imago astrologica*, 1652, and *Syzygiasticon instauratum*, 1653. In attempting to elaborate an experimental astrology, he confirmed an old idea that there was a 35 year cycle in the weather. He made numerous observations on the weather and the tides.

He was clerk of Magdalen College, 1640-8. Schoolmaster of Faversham, 1648-61. Later, appointed chaplain to the Lord Herbert, 1660-4. Archdeaconry of Sarum, 1664, and a prebend in Salisbury Cathedral that same year. Rector of Upwey, 1664-70. Lord Herbert offered him a chaplainship in 1660. It is clear that he languished until the Restoration and then received a living. Childrey made and improved telescopes.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 227, 285-296; II 1383, 30. • DNB: 4, 250-1. • DSB: 3, 248 [by J.D. North]. • Poggendorff: 1, col. 436. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 503-4. • Watt, *Bibliotheca Britannica*, 1824. • WBI.

1145. — English, 1660 [Issue A].

[Contained within a single rule box:] Britannia
Baconica: | Or, The Natural | Rarities | Of |
England, Scotland & Wales. | According as they
are to be found in every | Shire. | Historically
related, according to the Pre- | cepts of the Lord
Bacon; Methodically dige- | sted; and the Causes
of many of them | Philosophically attempted. |
With | Observations upon them, and Deductions
| from them, whereby divers Secrets in Nature |
are discovered, and somethings hitherto | reckoned
Prodigies, are sain to confess | the cause whence
they proceed. | Usefull for all ingenious men of
what Profession or | Quality soever. | [rule] | By
J. Childrey. | [rule] | Res semper aliquid apport
at novi. Terent. | [rule] | London, Printed for the
Author, and are to | be sold by H.E. at the sign of
the Grey-hound in | St. Paul's Church-yard, 1660.

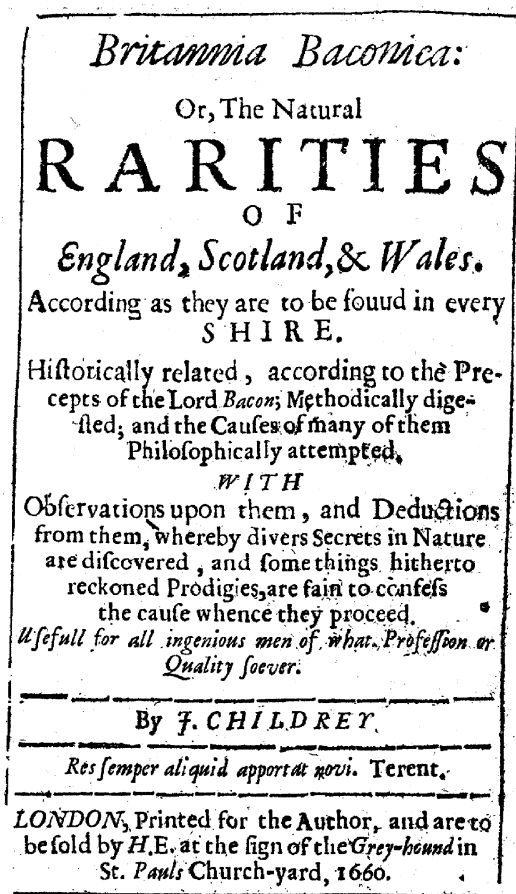
8°: A³ B-N⁸ O⁴; 108ℓ.; [32], 1-184 p. Errata on p. 184. Pages 167-168 inadvertently left blank at the time of printing.

CONTENTS: [2 pgs], Title page, verso blank.; [9 pgs], Dedicatory epistola.; [1 pg], Blank.; [16 pgs], "The Preface to the Reader."; [3 pgs], "An occassional Advertisment | to the Reader."; [1 pg], Blank.; 1-184, Text.

RARE. His most important book was *Britannia baconica*, 1660, in natural history.

REFERENCES: BL: [957.e.4].

1146. Reissue, 1661: [Contained within a single rule box:] Britannia Baconica: | Or, The Natural | Rarities | Of |
England, Scotland & Wales. | According as they are to be



BRITANNICA BACONICA, 1660

found in every | Shire. | Historically related, according to the Pre- | cepts of the Lord Bacon; Methodically dige- | sted; and the Causes of many of them | Philosophically attempted. | With | Observations upon them, and Deductions | from them, whereby divers Secrets in Nature | are discovered, and some things hitherto | reckoned Prodigies, are said to confess | the cause whence they proceed. | Usefull for all ingenious men of what Profession or | Quality soever. | [rule] | By J. Childrey. | [rule] | Res semper aliquid apportat novi. Terent. | [rule] | London, Printed for the Author, and are to | be sold by H.E. at the sign of the Grey-hound in | the sign of the Grey-hound in | St. Paul's Church-yard, 1661.

8°: A3 B-N8 O4; 106ℓ.; [30], 1-184 p. According to BM, this is a reissue of the 1660 edition with the imprint reset.

CONTENTS: [2 pgs], Title page, verso blank.; [9 pgs], Dedictory epistola.; [1 pg], Blank.; [14 pgs], "The Preface to the Reader."; [3 pgs], "An occasional Advertiment | to the Reader."; [1 pg], Blank.; 1-184, Text.

RARE. Most of the "natural rarities" described happen to pertain either to mineralogy or geology. These include references to minerals, fossils, rocks, and mineral waters. Typical of the period, this work contains an incredible amount of information, and as such constitutes an important historical work.

REFERENCES: BL: [291.b.38.]. • DSB: 3, p. 248. • LKG: XIV 400. • Porter, *Making of Geology*, 1980: pp. 38-39. • Smith, S., *Seventeenth Century Observations on Rocks, Minerals, Fossils, Etc., of Gloucestershire and Somerset*, 9, pt

4, 406-26: Proceedings of the Bristol Naturalists Society, Fourth Series: 9, pt 4, 406-26.

1147. Reissue, 1662: [Contained within a single rule box:] Britannia Baconica: | Or, The Natural | Rarities | Of | England, Scotland & Wales. | According as they are to be found in every | Shire. | Historically related, according to the Pre- | cepts of the Lord Bacon; Methodically dige- | sted; and the Causes of many of them | Philosophically attempted. | With | Observations upon them, and Deductions | from them, whereby divers Secrets in Nature | are discovered, and some things hitherto | reckoned Prodigies, are said to confess | the cause whence they proceed. | Usefull for all ingenious men of what Profession or | Quality soever. | [rule] | By J. Childrey. | [rule] | Res semper aliquid apportat novi. Terent. | [rule] | London, Printed for the Author, and are to | be sold by H.E. at the sign of the Grey-hound in | St. Paul's Church-yard, 1662. 8°: A3 B-N8 O4; 106ℓ.; [30], 1-184 p.

CONTENTS: [2 pgs], Title page, verso blank.; [9 pgs], Dedictory epistola.; [1 pg], Blank.; [14 pgs], "The Preface to the Reader."; [3 pgs], "An occasional Advertiment | to the Reader."; [1 pg], Blank.; 1-184, Text.

VERY SCARCE. Of the same setting as earlier issued, with t.-p. partly reset.

REFERENCES: BL: [E.1837.(2.)].

1148. Reissue, 1681: Britannia Baconica, or, The natural rarities of England, Scotland & Wales, according as they are to be found in every shire, historically related, according to the precepts of the Lord Bacon, methodically digested, and the causes of many of them philosophically attempted : with observations upon them ... whereby divers secrets in nature are discovered ... by J. Childrey. London, Printed for the author and are to be sold by H.E., 1681.

8°: [27], 184 p. RARE.

REFERENCES: Wing: C-3871.

French edition

1149. French transl., 1667: Histoire | Des Singularitez | Naturelles | D'Angleterre, | D'Escosse, Et Dv Pays | De Galles | Avec des raisonnemens qui expliquent les cau- | ses naturelles des choses qui paroissent | les plus prodigeuses. | Ce qui fait avec l'Histoire naturelle d'Irlande, | que l'on a donnée au Public depuis peu, vne | Histoire naturelle entiere, de tous les Royau- | mes & de tous les Estats quepossede le Roy de | la Grand' Bretagne. | Traduite de l'Anglois de Monsieur Childrey | Par M.P.B. | [ornament] | A Paris, | Chez Robert De Niville, an bout du | Pont S. Michel, au coin de la ruë de la Huchette, | à l'Bseu de France & de Nauarre. | [rule] | M. DC. LXVII. | Avec Privilege Dv Roy.

12°: [36], 315, [7] p., 1 leaf of plates.

RARE. Translated by Pierre Briot [*fl.* 1666-1709] of *Britannia Baconica* (London, 1661).

REFERENCES: BL: [435.a.4.]. • LKG: XIV 401a.

CHLADNI, Ernst Florenz Friedrich. (BORN: Wittenberg, Germany, 30 November 1756; DIED: Breslau, Germany, 3 April 1827) *German physicist*.

At the urging of his father, until 1778 Chladni studied philosophy and jurisprudence in Wittenberg and Leipzig. After the death of his father however, he turned to the natural sciences. His hopes of becoming a professor of mathematics at the University of Wittenberg were not realized. He turned to experimental acoustics and discovered the Chladni sound figures, which are named for him. To support himself, he invented a musical instrument called the Euphon, which he took on lecture tours to Dresden (1791), to Göttingen and Berlin (1792). Eventually, Chladni was appointed professor of philosophy and jurisprudence at Kemberg near Wittenberg.

REFERENCES: Bernhardt, W., *Dr. Ernst Chladni der Akustiker. Eine Biographie und geschichtliche Darstellung*



CHLADNI

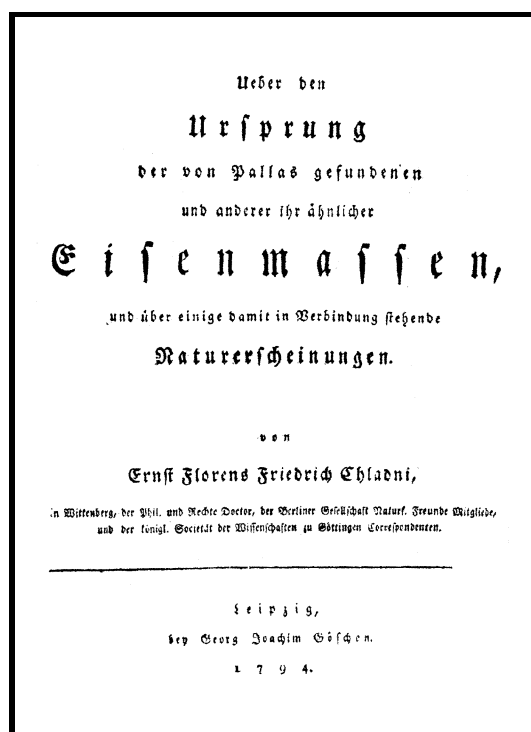
seiner Entdeckungen zur Erinnerung an seinen hundertjährigen Geburtstag den 30. November 1856. Wittenberg, 1856. 105 p., portrait. [BL 1609/4835]. • Chladni, E.F.F., *Über den kosmischen Ursprung der Metekorite und Feuerkugeln* (1794). Leipzig, Akademische Verlagsgesellschaft Geest & Portig, 1979. 103 p., illus., facsim, port. [Published as: *Ostwalds Klassiker der exakten Wissenschaften*, vol. 258.; includes a biography of Chladni and a study on the impact of his work.]. • DBA: I 187, 29-73; II 223, 314-320. • DSB: 3, 258-9 [By S.C. Dostrovsky]. • Eitner, *Quellenlexikon*, 1959. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Kohlschuetter, V., *Ernst Florens Friedrich Chladni*. 1897. 45 p. [A biographical sketch; BL 12249.m.11.]. • Loewenfeld, C., *Ernst Florens Friedrich Chladni. Skizze von Leben und Werk ...* Mit 3 Tafeln [including portraits] ... Sonderabdruck aus: *Abhandlungen des Naturwissenschaftlichen Vereins zu Hamburg*, etc. Hamburg, 1929. [BL 20088.b.24.]. • Marvin, U., "Ernst Florens Chladni (1756-1827) and the origins of modern meteorite research," *Meteoritics & Planetary Science*, 31 (1996), 545-88. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: 1, 644-5. • Melde, F., *Chladni's Leben und Wirken*. Marburg, 1888. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • NDB: 3, ?? • Poggendorff: 1, cols. 439-40. • Schimanck, H., "Beiträge zur Lebensgeschichte von Ernst Florenz Friedrich Chladni," *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, 37 (1953), 370-6. • Ullmann, D., *Ernst Florens Friedrich Chladni*. Leipzig, B.G. Teubner, 1983. 76 p., illus. [Published as: *Biographien hervorragender Naturwissenschaftler, Techniker und Mediziner*, vol. 65.]. • WBI. • *World Who's Who in Science*: 331.

1150. — German, 1794.

Ueber den | Ursprung | der von Pallas gefundenen
| und andern ihn ähnlicher | Eisenmassen, |
| und über einige damit in Verbindungen stehende
| Naturreicheinungen. | Von | Ernst Florens
Friedrich Chladni, | [...2 lines of titles and
memberships...] | [rule] | Riga, | bey Johann
Friedrich Herrknoch. | 1794.

8°: [1]-63, [1] p.

VERY RARE. Considered one of the foundation works of modern meteoritic studies, this thin volume bears the cumbersome and unrevealing title, *Concerning the Origin of the Mass of Iron Discovered by Pallas and Others similar to it, and Concerning a few Natural Phenomena Connected therewith*. However,



UEBER DEN URSPRUNG, 1794

at the start of the text Chladni asserts unequivocally that the fireballs sometimes seen in the sky consisted of compact and heavy matter, which came from cosmic space, and that the iron mass found by Pallas in Siberia was a meteorite similar to others that had sporadically fallen in other parts of Europe. Chladni then convincingly presents his evidence for this assertion.

At the time, meteorites and the fireballs that preceded them were thought to be of atmospheric origin and not necessarily connected to one another. To support his theory that meteorites and the fireballs that preceded their impact were of cosmic origin, Chladni compiled accounts from about two dozen reports. From this Chladni concluded the fireballs could not be connected to the northern lights, because of their high altitude they could not be electrical in nature, and they were unlike lightning in having a distinctive shape and following a parabolic path in the sky while they were also subject of repeated explosions. Chladni next turned his attention to reports of falls, documenting a total of nineteen. The most impressive, certainly, was Hraschina, which had been preceded by a fireball that had exploded into several parts and attested to by the sworn statements of seven eyewitnesses. Eight of the nineteen falls cited had occurred in the eighteenth-century: Ploschkovitz, Nicorps, Hraschina, Tabor, Albareto, Lucé, Aire-sur-la-Lys, and Eichstädt. Chladni next examined meteoritic iron discussing principally the Pallas iron [Krasnojarsk], although he provides brief accounts of other iron

CHLADNI

masses. Chladni concludes that there are bodies outside the earth's atmosphere that occasionally fall to earth as meteorites.

The impact of Chladni's work was to document in a well reasoned manner (1) that stones do fall from the sky, (2) that the stones (or irons) are the substance composing fireballs, and (3) that the fireballs have a cosmic origin. The first two ideas took hold in the scientific community soon after publication; however, it would be many decades before the cosmic origin of meteorites was definitively proven.

French transl., 1802-3: Coquebert, Eugène, trans., "Réflexions sur l'origine des diverses Masses, der fer natif, et notamment de celle trouvée par Pallas en Sibérie," Traduites de l'Allemand de M. Chladni, *Journal des Mines*, 15 (1802-3), 286-320, 446-485.

Facsimile reprint, 1974: [Los Angeles?], Organizing Committee of the 37th Annual Meeting of the Meteoritical Society, 1974. x, 63 p.

Another edition, 1979: Über Den Kosmischen Ursprung | Der Meteorite Und Feuerkugeln | (1794) | Von Ernst Florens Friedrich Chladni | Mit Erläuterungen von | Günter Hoppe | Mit 4 Abbildungen und einem Porträt des Verfassers | [ornament] | Leipzig 1979 | Akademische Verlagsgesellschaft | Geest & Portig K.-G. [1]-103, [1] p., illus., port.

CONTENTS: [1-2], Half title page, "Ostwalds Klassiker | Der Exakten Wissenschaften | Band 258 | ...," verso portrait of Chladni.; [3-4], Title page, verso publication info.; [5], "Inhalt."; [6]-9, "Einleitung."; [10]-17, "Biographisches über Chladni."; [18]-34, "Entstehung, Schicksal und Bedeutung | der Schrift Chlandis."; [35], "Chladni's Schrift von 1794."; 36, Facsimile title page of the 1794 edition.; [37]-38, "Inhalt."; 39-90, Text of Chladni's work.; [91]-99, "Anmerkungen."; [100], "Literatur."; [101]-103, "Nameverzeichnis."; [1 pg], Publisher's list.

Published as: *Ostwalds Klassiker der exakten Wissenschaften*, vol. 258, this modern edition contains biographical information about Chladni and an essay describing the importance of Chladni's original work in the science of meteorities.

REFERENCES: BL: [B.366.(7.)]. • Burke, *Cosmic Debris*, 1986: pp. 40-5 [includes portrait]. • LKG: XVI 342. • Marvin, U., "Ernst Florens Chladni (1756-1827) and the origins of modern meteorite research," *Meteoritics & Planetary Science*, 31 (1996), 545-88. • Ullmann, D., *Ernst Florens Friedrich Chladni*. Leipzig, B.G. Teubner, 1983. 76 p., illus. [Published as: *Biographien hervorragender Naturwissenschaftler, Techniker und Mediziner*, vol. 65.]

1151. — German, 1819.

Ueber | Feuer=Meteore, | und | über die mit denselben | herabgefallenen Massen, | von | Ernst Florens Friedrich Chladni, | [...10 lines of titles and memberships...] | [rule] | Nebst zehn Steindrucktafeln und deren Erklärung | von | Carl von Schreibers, | Director der k.k. Hof-Mineralien-Cabinette zu Wien. | [tapered rule] | Wien 1819. | Im Verlag bey J.G. Heubner.

8°: [iii]-xxiv, [1]-434 p., 10 lithographic plates. Includes bibliographical references. Includes a supplement written by Karl von Schreibers, "Anhang. Verzeichniss der Sammlung von Meteormassen, welche sich im K. K. Hof-Mineralien-Cabinette in Wien befindet, vom Director von Schreibers" (p. 425-434).

CONTENTS: [iii-iv], Title page, verso blank.; [v]-x, "Vorrede."—signed E.F.F. Chladni, September 1819.; [xi]-

xxiii, "Uebersicht des Inhalts."; xxiv, Errata.; [1], Sectional title page.; [2], Blank.; [3]-434, Text.

RARE. After the appearance of his 1794 work, Chladni continued his interest in meteorites. His employment as a journeying lecturer provided him with the opportunity to scour libraries for rare books and papers that documented fireballs and accounts of stones falling from the sky. In particular, Chladni concentrated on eyewitness accounts that were recorded in the old literature. The years 1816 to 1819 were particularly productive for this purpose, as he began delivering a series of lectures on fireballs and meteorites—the first such popular lectures ever given on the subject. Using his own collection of meteorites that he had acquired through donation, purchase or trade, he traveled from Paris to Vienna thrilling his audience with the accounts of the sky raining stone. As a consequence, he also had the opportunity to examine the meteorite specimens held in many private and public collections, most notably those at Vienna, the largest holding of the time. This allowed Chladni to complete his final book on the subject of meteoritics, *About Fire Meteors and their Fallen Masses*, which was published in Vienna in 1819.

Following the same formula as his 1794 work, Chladni provides a detailed description of the meteorite theory, adding comprehensive documentation of all reports of fireballs and meteorites. The importance and authority of the work in meteoritics was immediately recognized, although Chladni's evidence was still not sufficient to convince the scientific community of the cosmic origin of the stones. At Chladni's request, the director of the K.K. Hof-Mineralien-Cabinette of Vienna, Karl von Schreibers [1775-1852] added a supplement, documenting the meteorite falls represented in that collection.

REFERENCES: BL: [1136.i.28.]. • NUC.

CHLADNI, Georg.

1152. — Latin, 1665 [Dissertation].

Q.D.B.V. | Disputatio Physica | De | Metallis | In Specie Dictis | Quam | In illustri ad Albim Academia | Supremo moderante Numine | Sub Præsidio | Viri | Plurimum Reverendi, Amplissimi & Excellentissimi | Dn. Constatntini Ziegra/ | [...4 lines of titles and memberships...] | Autoret Respondens | Georgius Chladni, | Montano - Vallensis Vngarus. | Ad d.31 Majis: A.M. DCLXV. | In Auditorio Majori, Horis Matutinis. | [rule] | Wittebergae | Typis Johannis Borckardi.

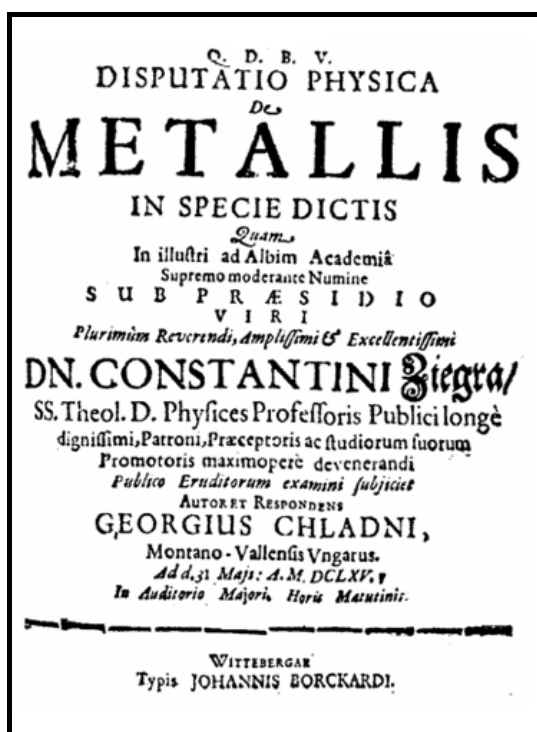
4°: A-D⁴ E³; 19ℓ.

RARE. In this short dissertation the known metals are described, including information on their source minerals. Constantinus Ziegra was præsidium, while Georg Chladni was respondent.

REFERENCES: BL: [B.231.(2.)]. • VD17: 39:159361C.

CHRIST, Johann Ludwig.

REFERENCES: LKG: 283.



DE METALLIS, 1665

1153. — German, 1785.

Geschichte unseres Erdkörpers von den ersten Zeiten der Schöpfung des Chaus an und von den Revolutionen desselben durch Vulkane, Erdheben und Ueberschwemmungen. Frankfurt und Leipzig, 1785.

8°: viii, 191 p. RARE.

REFERENCES: BL: [no copy listed]. • LKG: XIII 160.

CISTERICH, Cornelio August Severius Doelter Y.

See: Doelter (cisterich Y De La Torre), Cornelio August Severius.

CLAPP, Henry Lincoln. (BORN: 1839; DIED:)
American educator.

REFERENCES: ABA: I 300, 416-419. • WBI.

1154. — English, 1889 [First edition].

Thirty-Six Observation Lessons on Common Minerals. By Henry Lincoln Clapp ... Boston, D.C. Heath & Company, 1889.

8°: 83, [2] p. Published as part of the series: *Guides to Science Teaching* No. XV. At head of title, "Boston Society of Natural History ... Books of Reference."

VERY SCARCE. A beginners manual that gives in a series of lessons instructional methods for determining the common minerals. The author was a teacher and prepared these lessons based upon practical experience he acquired in the classroom.

REFERENCES: NUC. • USGS Library Catalog.

1155. Reissue, 1903: Thirty-Six Observation Lessons on Common Minerals. By Henry Lincoln Clapp ... Boston, D.C. Heath & Company, 1903.

8°: 83 p. Published as part of the series: *Guides to Science Teaching* No. XV. At head of title, "Boston Society of Natural History ... Books of Reference." VERY SCARCE.

REFERENCES: NUC. • USGS Library Catalog.



CLARKE

CLARKE, Edward Daniel. (BORN: Willingdon, England, 5 June 1769; DIED: Pall Mall, England, 9 March 1822) *English traveler, antiquary & mineralogist.*

Clarke was Senior Tutor of Jesus College, Cambridge. Beginning in the 1790's and lasting until near his death, he traveled extensively. Between 1799 and 1802, these tours included a long ranging excursion throughout Asia and Asia Minor. In 1808, he was appointed the first professor of mineralogy at Cambridge University. He also accepted a posts as Vicar of Harleton in 1805 and Rector of Yeldham in 1809, both of which he retained until his death. He built up a substantial mineral collection of worldwide localities, which was purchased after his death by Cambridge University in 1823 for £1,500. Clarke's *Travels in Various Parts of Europe, Asia and Africa* (6 vols., London, 1810-20) was a work said to be reliable in its descriptions and popular within English society.

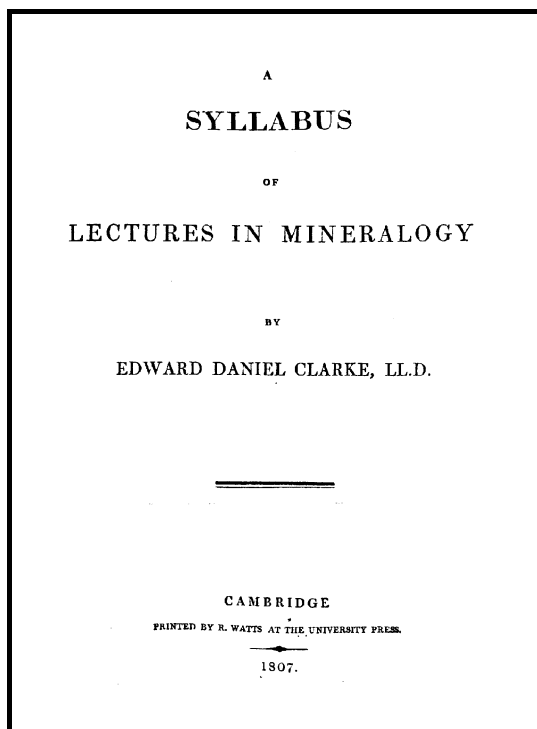
REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 50. • BBA: I 234, 337-371; II 1387, 47-55. • Cleevely, *World Palaeontological Collections*, 1983: 83. • DNB: 4, 421. • Drugulin, *Sechstausend Portraits*, 1863: no. 966. • DSB: 3, 290-2 [by D. McKie]. • *Encyclopaedia Britannica*, 11th edition. • Poggendorff: 1, cols. 450-1. • Sarjeant, *Geologists*, 1980: 2, 732-3 & Suppl. 2 (1996), 1, 511. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 47, 86 & 165. • *World Who's Who in Science*: 341.

1156. — English, 1807.

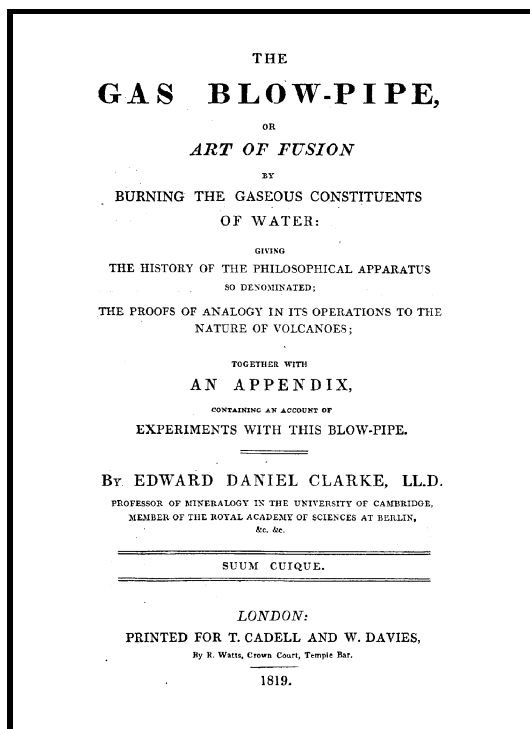
A | Syllabus | Of | Lectures In Mineralogy
| By | Edward Daniel Clarke, LL.D. | [double
rule] | Cambridge | Printed By R. Watts At The
University Press. | [tapered rule] | 1807.

8°: π⁶ B-Q⁴ R⁶; 65ℓ.; [2], [i]-ii, [1]-126 p., 5 leaves printed recto side only. PAGE SIZE: 245 x 150 mm.

CONTENTS: [2 pgs], Title page, verso blank; [i]-ii, "To The | University Of Cambridge."—signed E.D. Clarke,



SYLLABUS, 1807



THE GAS BLOW-PIPE, 1819

12 August 1807.; [1], "Logic Of The Distribution."; [2], "And God said, Let the Waters under the | ..."; [3]-126, Text.; [1 leaf], "Synopsis, | Exhibiting | The Classification Of Minerals | According To | The Author's Methodical Distribution."; [4 leaves], Tables, printed on recto only.

RARE. This book contains an outline of Clarke's mineralogical lectures as delivered at Cambridge University in the early part of the nineteenth century. The author follows the Linnaean natural history model in his classification, by placing minerals into a Class, Order, Genus, Species, Variety schematic. This text would have been used by students attending the lectures and consequently many copies were probably badly damaged or destroyed by their owners.

Other editions, 2nd edition, 1818: *A Syllabus of Lectures in Mineralogy, containing a methodical distribution of minerals.* (Second edition.). London, T. Cadell & W. Davies, 1818. 8°: 103 p. [BL, 433.b.19.]

3rd edition, 1820: *A Syllabus of Lectures in Mineralogy, containing a methodical distribution of minerals.* London, T. Cadell & W. Davies, 1820. 8°: 111 p. [BL, B.374.(11.).]

REFERENCES: NUC.

1157. — English, 1819.

The | Gas Blow-Pipe, | or | Art Of Fusion | By |
Burning The Gaseous Constituents | Of Water:
| Giving | The History Of The Philosophical
Apparatus | So Denominated; | The Proofs Of
Analogy In Its Operations To The | Nature Of
Volcanoes; | Together With | An Appendix, |
Containing An Account Of | Experiments With

This Blow-Pipe. | [double rule] | By Edward Daniel
Clarke, LL.D. | [...3 lines of titles and memberships...]
| [double rule] | Suum Cuique. | [double rule] |
London: | Printed For T. Cadell And W. Davies,
| By R. Watts, Crown Court, Temple Bar. | [short
rule] | 1819.

8°: π^4 B-G⁸ H⁷; 59ℓ.; [4], [i]-iii, [1], [1]-109, [1] p.,
frontispiece (showing a gas-blowpipe in operation).
PAGE SIZE: 212 x 132 mm.

CONTENTS: [Frontispiece].; [2 pgs], Title page, verso
blank.; [1 pg], "Explanation Of The Frontispiece."; [1 pg],
Blank.; [i]-iii, "Preface."—dated 19 January 1819.; [1 pg],
Blank.; [1]-103, Text.; [104], Blank.; [105]-109, "Index |
To | The Experiments."; [1 pg], "By the same Author: |
Printed for T. Cadell And W. Davies, Strand: | ..."

PLATES: Frontispiece: "Apparatus for using the Gas
blowpipe, and for securing the safety of the Opeator."
Signed: R.B. Harraden del. J Schury sculp. A descriptive
commentary of this plate is included in the text.

SCARCE. This work describes in detail Clarke's
version of the hydrogen-oxygen blow-pipe. The author
provides a short history of the problem, a review of
his new apparatus design, and descriptions of a large
number of experiments that were completed before the
extremely high temperature of the blow-pipe. Included
in the discussion are Clarke's successful experiments
in reducing apparently non-metallic mineral substances
to their metallic state. These include the reduction
of lime, Iceland Spar, Aragonite, common chalk, and
limestone from various world locations, to elemental
Calcium, various Apatite specimens to Phosphorus,

aluminum containing minerals to elemental Aluminum, etc. In another part, Clarke describes the unsuccessful experiments in reduction. Included are Barite, strontium earth, Cerite, Columbite, Chromite, Titanite, Scheelite, meteoritic stones, etc. As can be judged, this work was important step in high temperature analysis of mineral substances.

REFERENCES: Bolton, *Bibliography of Chemistry*, 1893: 368. • Cole, *Chemical Literature*, 1988: no. 279. • NUC: [NC 0460548]. • Oldroyd, D.R., "Edward Daniel Clarke, 1769-1822, and his rôle in the history of the blow-pipe," *Annals of Science*, **29** (1972), 213-35: [critical comments]. • Partington, *History of Chemistry*, 1961-70: **3**, 725.

1158. — English, 1812 [American issue].

Travels in Various Countries of Europe, Asia and Africa. Part the First: Russia, Tartary, And Turkey. By Edward Daniel Clarke. Philadelphia, Published by Anthony Finley; Printed at the Lorenzo Press of E. Bronson, 1812.

8°: 612 p., 2 maps (one folding).

VERY SCARCE. An important early account of Clarke's journey through Russia, with stays in Moscow and St. Petersburg before traveling to the Crimea, the land of the Don Coassacks, Tartary, Circassia and Turkey. Throughout his life, he travelled widely throughout Europe and Asia, collecting sculpture and manuscripts as well as the geological specimens that were his academic study. This book was later reprinted several times, and its text was included in the comprehensive four volumes of travels Clarke eventually published.

Contents include: Tables of Russian Measure; Petersburg; journey from Petersburg to Moscow; Novogorod; Moscow; journey from Moscow to Woronetz; to the territory of the Don Cossacks; capital of the Don Cossacks; voyage down the Don, to Azaf and Taganrock; European and Asiatick shores of the Sea of Azuf; journey through Kuban Tartary to the Frontier of Circassia; journey along the frontier of Circassia to the Cimmerian Bosphorus; from the Cimmerian Bosphorus to Cassa; fro Caffa to the Capital of the Crimea; to the Heracleotick Chersonesus; along the south coast of the Crimea; from the Crimea, by the Isthmus of Perecop, to Nicholae; to Odessa; voyage to the Harbour of Ineada in Turkey; from the harbour of Ineada, in the Black Sea, to Constantinople; etc.

REFERENCES: NUC. • Shaw & Shoemaker, *American Bibliography*, 1958-83: no. 22541.

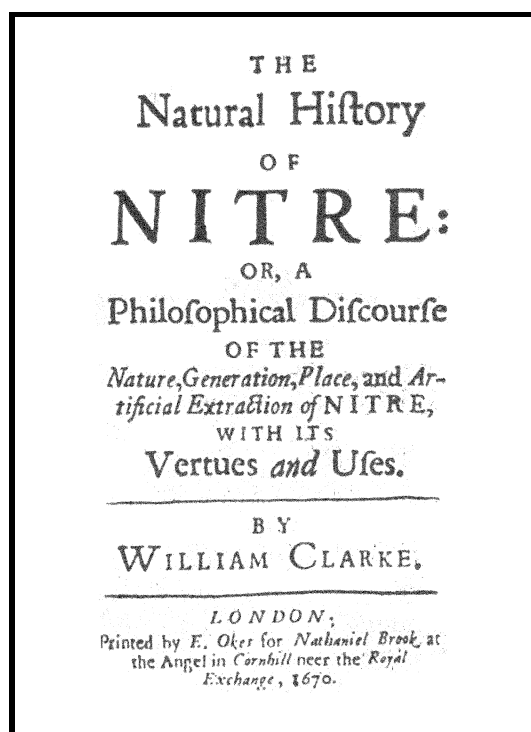
CLARKE, William. (BORN: 1640?; DIED: 1684) *English physician & writer.*

Fellow of Oriel College of Oxford.

REFERENCES: BBA: I 236, 260-261. • Watt, *Bibliotheca Britannica*, 1824. • WBI.

1159. — English, 1670.

The | Natural History | Of | Nitre: | Or, A | Philosophical Discourse | Of The | Nature, Generation, Place, and Ar- | tificial Extraction of Nitre, | With Its | Vertues and Uses. | [rule] | By | William Clarke. | [rule] | London; | Printed by E. Okes for Nathaniel Brook at | the Angel in Cornhill neer the Royal | Exchange, 1670.



THE NATURAL HISTORY OF NITRE, 1670

8°: A-G⁸; 55ℓ.; [15], [1], 93, [1] p.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], Dedication, dated 11 June 1670, William Clarke.; [10 pgs], "To The | Reader."; [1 pg], Blank.; 1-93, Text.; [1 pg], Blank.

RARE. This rare economical mineralogy describes the nature, mining and occurrences of saltpeter, and principal component of gun powder.

Contents: I. The name and nature of nitre (pp. 1-15). II. Of the generation and place of nitre (pp. 16-39). III. Of the artificial manner of extracting and refining of nitre (pp. 40-47). IV. Of the virtues and uses of nitre (pp. 48-80). On pages 81-93, there is a section on the importance of nitre in the manufacture of gun powder.

REFERENCES: LKG: XVI 387. • Wing: C4564.

1160. Latin transl., 1675: Naturalis Historia | Nitri, | Sive | Discursus Philosophicus | De | Natura, Generatione, Loco & artificiali | Extratione Nitri, | Ejsuq; | Virtutibus & Vsibus. | Authore | Guilielmo Clarke Anglo. | 16 [ornament] 75. | Francofurti & Hamburgi, | Impensis Joannis Naumanni | & Georgii Wolffii.

8°; 79, [1] p. VERY SCARCE.

REFERENCES: BL: [B.257.(3.)]. • LKG: XVI 388. • VD17: 23:244435W.

CLAUDER, Gabriel. (BORN: 1633; DIED: 1691) *Hungarian.*

REFERENCES: LKG: 283. • Poggendorff: 1, cols. 451-2.

1161. — Latin, 1684.

Gabrielis Clauderi, ... Inventum Cinnabarinum, hoc est, Dissertatio de cinnabari nativa Hungarica, longa circulatione in majorem efficaciam fixata

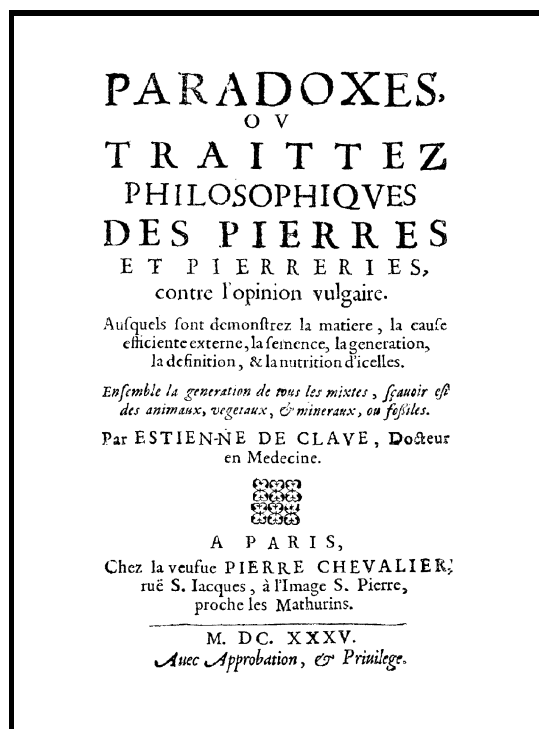
CLEAVELAND

et exaltata . Ad normam academiae naturae curiosorum. Jenae, Sumtibus Johannis Biellkii, 1684.

4°:)(2 A-H⁴ I²; 36ℓ.; [4], 68 p. Title page in red and black with printer's woodcut device. PAGE SIZE: 187 x 152 mm.

RARE. Describes quicksilver (mercury) and cinnabar, detailing its history, alchemical properties, and use in medicine. Particular attention is given to its occurrence in Hungary.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 137. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 162. • *Freilich Sale Catalog*: no. 129. • LKG: XVI 458.



PARADOXES, 1635

CLAVE, Étienne de. *French physician, chemist & philosopher.*

REFERENCES: *Biographie Universelle*. • Ferchl: p. 98. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 162. • Jöcher, *Gelehrten-Lexikon*, 1750-51: 1, 1943. • LKG: 283. • *Nouvelle Biographie Générale* (Hoefer). • Partington, *History of Chemistry*, 1961-70: 3, 7-8. • Thorndike, *History of Magic*, 1923-58: 7, 192 & 8 121. • Watt, *Bibliotheca Britannica*, 1824.

1162. — French, 1635.

Paradoxes, | Ov | Traitez | Philosophiques | Des Pierres | Et Pierreries, | contre l'opinion vulgaire. | Ausquels sont demonstrez la matiere, la cause | efficiente externe, la semence, la generation, | la definition, & la nutrition d'icelles. | Ensemble la

generation de tous les mixtes, sçavoir est | des animaux, vegetaux, & minéraux, ous foffiles. | Par Estienne De Clave, Docteur | en Medecine. | [ornament] | A Paris, | Chez la veusue Pierre Chevalier, | ruë S. Iacques, à l'Image S. Pierre, | proche les Mathurins. | [rule] | M. DC. XXXV. | Avec Approbation, & Priuilege.

8°: [24], [1]-492, [2] p., plate. Errata: p. [493].

RARE. The literary tool of writing philosophical essays as a paradox was a great success in the sixteenth century. De Clave's *Paradoxes, ou Traitez Philosophiques der Pierres et Pierreries* follows this tradition. Within this mineralogical work, the nature of precious stones and minerals and the definition of their formation are discussed, much as De Boott wrote in his classic tome.

In the foreword to the work, de Clave outlines an ambitious goal of the book, which was to write forty treatises outlining the fruits of over thirty years of research. However, only the two books contained in the *Paradoxes* were ever published. The first of these in 18 chapters discusses the opinions of previous researchers on the definitions of stones, their material cause (chap. iii-x) and their efficient cause (chap. xi-xviii). Here the principle authorities are Aristotle, Theophrastus, Avicenne, Albertus Magnus, Agricola Gabriel Fallopio, Jules-César Scaliger and Girolamo Cardano, which reflects the importance as well as the tradition of Aristotelian philosophy in the mineralogical science of the time. De Clave however attacks their opinions on the formation of stones and metals. The second book in 28 chapters describes the generation (chap. iii-viii), the seeds (chap. xi-xvii), the definition (chap. xx-xxiv) and the nutrition (chap. xxv-xxviii) of stones. At this time it was popular to believe that stones formed from seeds, much as plants, found in the earth.

REFERENCES: BL: [990.b.1.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 7. • LKG: XVI 84. • Sinkankas, *Gemology Bibliography*, 1993: [no copy listed]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 491. • Wellcome Catalog (Books): 1, no. 1494.

CLEAVELAND, Parker. (BORN: Byefield, Massachusetts, U.S.A., 15 January 1780; DIED: Brunswick, Maine, U.S.A., 15 October 1858) *American physician, geologist, mineralogist & educator.*

Cleaveland graduated with an M.A. from Harvard in 1802, receiving his M.D. from Dartmouth in 1823, and his LL.D. from Bowdoin College on 1824. From 1799 to 1802, he taught school in York, Maine, then he became a tutor in math and natural philosophy at Harvard until 1805. Cleaveland was then appointed professor of math and natural philosophy at Bowdoin College where he remained the rest of his life. He was also was from 1820 to '58, professor of materia medica at the Medical School of (Brunswick) Maine. Cleaveland held membership in many scientific societies including the American Academy of Arts and Sciences and the American Philosophical Society. A variety of the mineral albite was named "Cleavelandite" after him by H.J. BROOKE in 1823.

REFERENCES: ABA: I 312, 64-65, 106-114. • *American Chemists & Chemical Engineers*: 1, 83-4 [by S.E. Kamerling].



CLEAVELAND

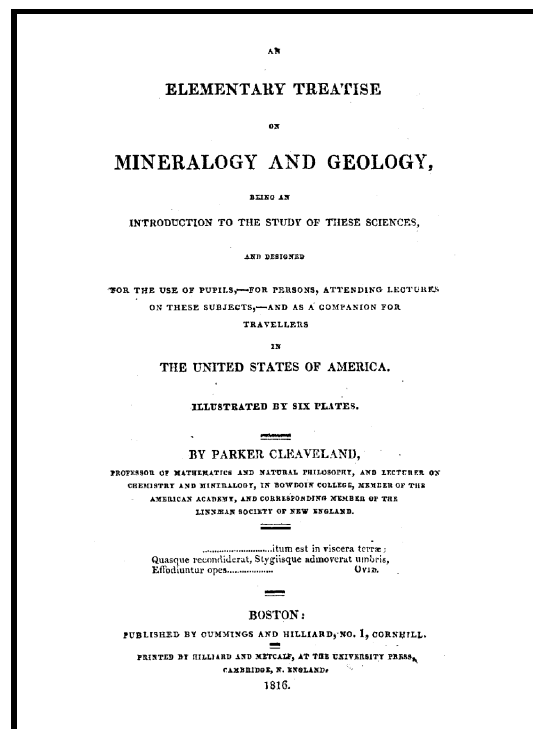
• *Catalogue of Portraits of Naturalists*: 292 [1 portrait listed]. • DAB: 4, 189-90 [by M.P. Cram]. • DSB: 3, 313 [by J.G. Burke]. • Elliott, *Biographical Index*, 1990: 44. • Elliott, *Biographical Dictionary*, 1979: 56. • Greene & Burke, *Minerals in the Age of Jefferson*, 1978. • Ireland, *Index to Scientists*, 1962: 130. • Merrill, *First One Hundred Years*, 1924: 45-6, portrait (p. 42). • Merrill, *History of American Geology*, 1906. • *National Cyclopaedia of American Biography*: 13, 56, portrait. • Riley, T.A., "Goethe and Parker Cleaveland," *Publications of the Modern Language Association of America*, 61 (1952), 350-74. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 512-3. • Thomas, *Dictionary of Biography*, 1884: 618. • WBI. • Woods, L., *Address on the life and character of Parker Cleaveland, LL.D., Late professor of chemistry, mineralogy and natural philosophy in Bowdoin College. Delivered in Augusta, January 19, 1859, before the Maine Historical Society*. Brunswick, Maine, J. Griffin, 1860. [1]-80 p., frontispiece [portrait]. • *World Who's Who in Science*: 344.

1163. — English, 1816 [First edition].

An | Elementary Treatise | on | Mineralogy and Geology, | being an Introduction to the Study of These Sciences, | and designed | for the use of pupils, — for persons attending lectures | on these subjects, — and as a companion for | travelers | in | The United States of America. | Illustrated by Six Plates. | [double rule] By Parker Cleaveland, | [...4 lines of titles & memberships...] | [double rule] | [...3 lines of Latin quotation...] | [double rule] | Boston: | Published by Cummings and Hilliard, No. 1, Cornhill. | [double rule] | Printed by Hilliard and Metcalf, at the University Press, | Cambridge, N. England. | 1816.

8° in 4s: [a]⁴ b² 1-82⁴ 83² 84⁴; 340^{l.}; [i]-xii, [1]-668 p., 5 folding plates, one folding hand-colored map. PAGE SIZE: 235 x 140 mm. uncut.

CONTENTS: [i-ii], Title page, verso "District of Maine" registration notice.; [iii], Dedication to Benjamin Vaughan.; [iv], Literature and abbreviations.; [v]-x, "Preface."; [xi]-xii, "Contents."; [1]-4, "Introduction to the Study of Mineralogy. Chapter I. Definitions and Preliminary Observations."; 4-66, "Chapter II. Properties of Minerals."; 66-



ELEMENTARY TREATISE, 1816

84, "Chapter III. Systematic Arrangement of Minerals."; 84-86, "Chapter IV. Nomenclature of Minerals."; 86-585, "Tabular View of Simple Minerals" —being the descriptive mineralogy.; [586]-636, "Introduction to the Study of Geology.; [637]-641, "Remarks on the Geology of the United States, Explanatory of the subjoined Geological Map — (PL. VI)."; [642]-647, "Vocabulary, containing an explanation of certain terms, used in the preceding volume.; more particularly those which relate to Chemical Nomenclature."; [648]-649, "Explanation of the plates."; [650], Blank.; [651]-667, "Index."; 668, "Errata."; [At end], plates and map.

PLATES: The folding hand-colored map shows the eastern United States to the west of the Mississippi River. Major cities and rivers are located. In the lower right-hand quadrant is the text: "The | United States | of | America | Published by | Cummings & Hilliard. | N^o 1. Cornhill. | Boston. | Wightman Sc." The five folding plates show either apparatus or crystal drawings. Plates 1, 2 & 4 are signed W.B. Annin Sc., while plates 3 & 5 are signed M. Butler Sculp.

SCARCE. This is the first textbook authored by an American, which focused on the mineralogy and geology of America. From the outset Cleaveland had set as his task to write a textbook of mineralogy and geology particularly suited to American readers. All other mineralogies prior to this volume had been European in origin, and no one had described the minerals of America in a comprehensive way. The task for Cleaveland was daunting. America was a large area which he could not hope to completely explore. Even so Cleaveland took the first step. Starting in 1809 he began to develop a network of correspondents and informants throughout the Eastern United States with the goal of developing a

CLEAVELAND

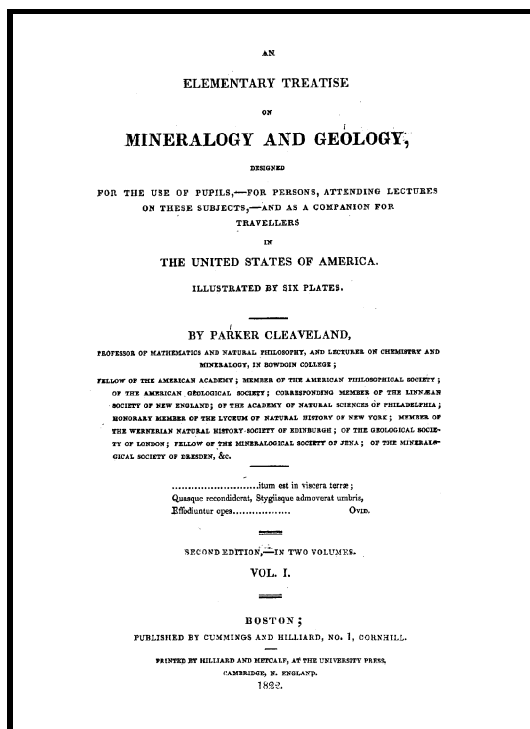
list of American mineral localities. Through persevering diligence he slowly accumulated the necessary information. Even the War of 1812 did not unduly delay the project, although Cleaveland did prepare his notes for rapid evacuation in the event the British soldiers encamped several miles away did pillage Bowdoin College. Throughout this research Benjamin Silliman of Yale University was a tower of strength to Cleaveland and his project; Silliman supplied specimens, preformed chemical analyses and experiments and advised Cleaveland as to the general plan the book should follow.

The work is divided into three sections: Introduction, Descriptive Mineralogy and Geology. The Introduction is made up of four chapters. The first covering definitions and preliminary observations is derived from the German school of mineralogy, most notably Werner's philosophies. The second chapter concerns crystallography, external characters and chemical composition of minerals. Chapter three outlines the classification system by which the minerals will be arranged. It is a composite system with its roots in the schemes developed by Haüy and Bronigart. The final chapter of the introduction describes the nomenclature of mineralogy. Following the introduction, a "Tabular View of the Simple Minerals" is presented. This section the largest of the work is essentially a descriptive mineralogy. It emphasizes American localities but is also one of the great descriptive mineralogies of the time. Cleaveland had not studied in Europe, and so his only knowledge of mineralogy had been self learned from the principle mineralogical works of Kirwan, Haüy, Jameson, Thomson, Bronigart, Werner, etc. In his descriptions, Cleaveland synthesizes the ideas of these varied authors into a description for each mineral that is however his own statement. The final section of Cleaveland's *Treatise* is devoted to the geology of the United States, and includes as illustration a geological map of the Atlantic seaboard. This was a composite of a geographical map prepared by his publisher, Cummings and Hilliard, and a geological map previously published by William Maclure.

Upon its publication the *Treatise* was deservedly praised both in America and Europe as the definitive statement on American mineralogy. Reviewers on both sides of the Atlantic praised its content, and the tireless efforts of the author in acquiring locality information. His peers also acknowledged the value of the work. No less a personage the famous Haüy is reported to have called it, "the best elementary work on the science extant." It was due to this welcome reception that the first printing of 1000 copies was nearly sold out by the summer of 1818.

REFERENCES: Dana's 7th (Bibliography): 69. • *Freilich Sale Catalog*: no. 130. • Hazen & Hazen, *American Geological Literature*, 1980: no. 2420. • NUC. • Rink, *Technical Americana*, 1981: no. 775. • Roller & Goodman, *Catalogue*, 1976: 1, 216. • Shaw & Shoemaker, *American Bibliography*, 1958-83: no. 37266.

1164. 2nd edition, 1822: An | Elementary Treatise | on | Mineralogy and Geology, | designed | for the use of pupils, — for persons, attending lectures | on these subjects, —



ELEMENTARY TREATISE, 1822

and as a companion for | travellers | in | The United States of America. | Illustrated by six plates. | [rule] | By Parker Cleaveland, | [...9 lines of titles & memberships...] | [rule] | [...3 lines of Latin quotation...] | [double rule] | Second edition, — In Two Volumes. | Vol. I. [-II.] | [double rule] | Boston; | Published by Cummings and Hilliard, No. 1, Cornhill. | [rule] | Printed by Hilliard and Metcalf, at the University Press, | Cambridge, N. England. | 1822.

[Vol 1] 8° in 4s: [a⁴] b² 1-14⁴ 15² 16-60⁴ 61²; 246ℓ.; [i]-x, [2] contents, [1]-480 p., frontispiece folding map; [Vol 2] 8° in 4s: π¹ 61² 62-103⁴; 167ℓ.; [2], [481]-818, [1] errata, [1] blank p., 5 folding plates (mostly of crystals). PAGE SIZE: 212 x 124 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "District of Maine" registration notice.; [iii], Dedication to Benjamin Vaughan.; [iv], "Advertisement."; [v]-x, "Preface."; [2 pages], "Contents."; [1]-4, "Introduction to the Study of Mineralogy. Chapter I. Definitions and Preliminary Observations."; 4-76, "Chapter II. Properties of Minerals."; 76-94, "Chapter III. Systematic Arrangement of Minerals."; 97-98, "Tabular View of Simple Minerals.; according to the order, in which they are arranged and described in this work."; [99]-116, "Tabular View."; [117]-480, "Elementary Treatise on Mineralogy"—being the descriptive mineralogy;

[Vol 2] [2 pgs], Title page, verso "District of Maine" registration notice.; [481]-717, Descriptive mineralogy continues from the previous volume.; [718]-771, "Introduction to the Study of Geology."; [772]-774, "Appendix I. Meteoric Stones."; 774-783, "Appendix II. This Appendix contains an account of those facts, which have been collected during the printing of the preceding volume ..."; [784]-788, "Remarks on the geology of the United States, explanatory of the Subjoined Geological Map. (Pl. VI.)."; [789]-796, "Vocabulary, containing an explanation of certain terms, used in the preceding volume.; more particularly those, which relate to the Chemical Nomenclature."; [797]-798, "Explana-

tion of the Plates.”; [799]-818, “Index.”; [1 pg], “Errata.”; [1 pg], Blank.; [At end], 5 plates.

SCARCE. The first edition of the *Treatise* had sold out in 1818. Cleaveland at the behest of his publisher undertook the preparation of a second edition. For this work he decided to focus even more on American localities. This led him to send out an announcement of his intention to produce a second edition, adding an appeal for descriptions of mineral localities in the United States.

“I am preparing a new edition of my Mineralogy, and solicit from you accounts of new Localities, and such other remarks, as may tend to render the work more useful.”

“I wish to connect with the account of the Locality some brief Geological notice, viz. whether the mineral occurs in veins, or in beds, or is disseminated—the associated minerals—and the rock, which contains them. In most cases, the form, structure, and prevailing color of the mineral may be mentioned.”

“I also wish to obtain as accurate information, as possible, in regard to all minerals explored for *useful* or *ornamental* purposes, such as Nitre, Common Salt, Marble, Marl, Gypsum, Precious Stones, Steatite, Roof Slate, Clays, Pigments, Anthracite, Graphite, Coal, Ores of metals, Chromate of Lead, &c. The quantity of the aforementioned substances *annually* obtained or manufactured, the *quality*, including the per cent. of metal yielded by ores, and the *price* are particularly requested.” [Quoted by Greene, J.C. & Burke, J.G. (1978), p. 90–91.]

The response to Cleaveland’s request was extraordinary. His colleagues were eager to supply all the information they could to insure the second edition was a success. More than any revisions Cleaveland made to the text, it was the inclusion of this data that ballooned the size of the *Treatise* an additional 150 pages.

This work with minor revision follows the scheme of the first edition. It contains a frontispiece geological map prepared from William Maclure’s earlier map of 1817 and written communications with H.H. Hayden. It was the second major geological map of the United States. Of the text, the first part treats crystallography, physical and optical properties, chemistry, systematics of mineralogy, and nomenclature. This is followed by the descriptive mineralogy, which begins in volume one and is carried well into the second. The introduction to geology then commences. A vocabulary, explanation of the five plates, and an index conclude the work.

REFERENCES: Dana’s 7th (Bibliography): 69. • *Freilich Sale Catalog*: no. 131. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 216.

1165. — English, 1873.

Address | made at the | Opening of the Cleaveland Cabinet | of | Bowdoin College, | July 10, 1873. | By Nehemiah Cleveland. | With an Appendix. | Boston: | James R. Osgood And Company. | 1873. 8°: 35 p.

RARE. A beloved teacher, a natural history cabinet was inaugurated in Parker Cleaveland’s honor on July 10, 1873 at Bowdoin College, Maine. This is an account of the opening address made at that occasion.

REFERENCES: NUC. • NYPL Catalog.

CLÉMENT-MULLET, Jean-Jacques. (BORN: 1796; DIED: c1865) *French student of oriental languages & translator.*

Clément-Mullet published various translations of works from German, Arabic, and Hebrew.

REFERENCES: DBF: 8, col. 1453. • Sinkankas, *Gemology Bibliography*, 1993: 1, p. 224.

1166. — French, 1868.

Essai sur la Minéralogie Arabe ... Basée sur le Traité de Teifaschi [Al-Tifashi (?-651/1253), Azhar Al-Afkar]. Suivi de: Recherches sur l’histoire naturelle... Chez les Arabes. Paris, 1868 & 1858.

8°: 248 p.; 28 p.

VERY SCARCE. This is an extensive, annotated study of Arabic mineralogy, based mostly on Tefaschi’s treatise on gemstones that appeared about 1240 C.E. The author was an expert in oriental studies and his commentary is authoritative and fully referenced. A valuable work for those interested in Arabic mineralogy and gemology.

Facsimile reprint, 1981: *Essai sur la Minéralogie Arabe ... Basée sur le Traité de Teifaschi [Al-Tifashi (?-651/1253), Azhar Al-Afkar].* Suivi de: Recherches sur l’histoire naturelle... Chez les Arabes. Paris, 1868; 1858. (Journal Asiatique, extrait 1; idem, 5e serie, XI). [4], 1-248, [379]-406, [4] p.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: nos. 1384 & 1385.

CLETTIUS, Vitus.

1167. — Latin, 1599.

Theses de Metallis. Lipsiæ, 1599.

4°: 4ℓ.; [8] p. EXTREMELY RARE.

REFERENCES: LKG: XVI 21.

CLOIZEAUX, Alfred-Louis-Olivier Legrand Des.

See: Des Cloizeaux, Alfred-louis-olivier Legrand.

CLOSTER, Friderico Laurentio de Jemgumer.

1168. — Latin, 1746 [Collection catalog].

Mvsevm | Closterianvm | Sive | Catalogvs Rervm | Tam Arte Factarvm, Qvam Natvra- | livm, Tam Exoticarvm, Qvam | Domesticarvm, | Ex | Tripilici Natvrae Regno, | Qvas | Fridericvs Lavrentivs | von Jemgvmer Closter | [...4 lines of titles and memberships...] | [rule] | Halae Svevor. MDCCXLVI. 4°: A-G⁴ H²; 30ℓ.; [1]-60 p., one folding plate (fossils). PAGE SIZE: 210 x 155 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-11, Dedication to Francisco Ernesto Bruckmanno, signed Friderico Laurentio de Jemgvmer Closter, 4 October 1746.; [12]-40, Text.; 41-60, “Altera Pars | De | Artefactis.”

RARE. This catalog of Closter’s museum was append to the end of Brückmann’s *Epistolorum Itinerariorum Centuria* volume 2. It is divided into two parts. The first treats the animals, shells, minerals and stones contained in the collection, while the second covers artificial items such as musical instruments.

REFERENCES: BL.

COBRES, Joseph Paul Edlen von. (BORN: 1749; DIED: Augsburg, Germany, c1826) *German merchant.*

Cobres was a member of the Jena Mineralogical Society. He was also a royal advisor, Maltheferitter and Reichsedler in Augsburg.

REFERENCES: DBA: I 195, 361-362. • Gradmann, *Das Gelehrte Schwaben*, 1802. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Schwabe, *Historische Nachricht*, 1801. • WBI.

COCHON DE LAPPARENT

1169. — German, 1781-2 [Bibliography].

[Engraved title page; contained within an elaborate, engraved border showing a scene from nature:] *Deliciae Cobresianae* | J.P. Cobres | Büchersammlung | zur | Naturgeschichte | [signed at bottom:] J.F. de Göz inv. et scit 1782.

2 vols. [VOL 1: 1781] 8°: π^4 a⁸ b⁶ A-I⁸ K⁴ L-R⁸ S⁶ T-Z⁸ Aa-Gg⁸ Hh¹; 253 ℓ .; [8], [i]-xxviii, [1]-470 p.; [VOL 2: 1782] 8°: π^3 Hh⁷ Ii-Zz⁸ Aaa-Ooo⁸ Ppp⁵; 247 ℓ .; [6], 471-956, [1] errata, [1] blank p., index. Paged continuously, each volume has an added, engraved title page. Engraved head piece and on page 828 a quaint engraved printer's device occurs. The engravings were drawn and executed by J.F. von Göz. PAGE SIZE: 198 x 121 mm.

CONTENTS: [Vol 1] [2 pg], Half title page, "I. | Theil," verso blank.; [2 pg], Title page, verso blank.; [2 pg], Engraved title page.; [1 pg], Dedication to the friends of natural history.; [1 pg], Blank.; [i]-xv, "Vorbericht."—signed Cobres, 1781.; xvi-xix, "System Des Catalogs."—consisting of a description of the overall classification in both German and Latin.; xx-xxviii, "Erklärung | Der Verkürzungen."; [1]-470, Text.

[Vol 2] [2 pgs], Half title page, "II. | Theil," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], Engraved title page.; 471-798, Text.; [799]-828, "Verbesserungen | und Ergänzungen."; [829]-956, "Register."; [1 pg], "Druckfehler."; [1 pg], Blank.

VERY SCARCE. Early classified catalog of the author's own library consisting of c2,500 entries with detailed collations, notes and references to reviews. All three realms of natural history are amply represented, including mineralogy. The work concludes with an author/title index. After this catalog was published, Cobres continued to add volumes to his library. This augmented library was later sold by the bookseller, W. Birett, who issued a catalog, *Verzeichniss der Bücher der berühmten naturhistorischen Bibliothek des weiland Herrn J.R. Ritters von Cobres, deren Verkauf um billige, sehr verminderte Preise besorgt wird von Wilhelm Birett ... in Augsburg*. Augsburg, 1827. [8°: iv, 134, [2] p., listing 3,370 items].

According to Petzholdt, an abridged *Deliciae Cobresianae* was compiled by C.F. Prange under the title *Systematisches Verzeichniss aller derjenigen Schriften* (Halle, 1784) [which see].

Facsimile reprint, 1966: *Deliciae Cobresianae* | J.P. Cobres | Büchersammlung | zur Naturgeschichte | A. Asher & Co. | Amsterdam | 1966. 2 vols., 8°: [8], [i]-xxviii, [1]-470 p.; [6], 471-956, [2] p.

REFERENCES: BL. • BMC: 1, 360. • Bridson, *History of Natural History*, 1994: Bc489. • Johnson, D.E., "A concordance of abbreviations used in references to reviews in botanical bibliographies by Cobres (1782), Böhmer (1787) and Miltitz (1829)," *Huntia*, 3 (1979), 103-14. • Murray, *Museums*, 1904: 1, 6. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 545. • Stafleu, F.A., "Deliciae bibliographicae," *Taxon*, 17 (1968), 218-20.

Orographische Briefe uber das Siebengebirge und die benachbarten zum Theile vulkanisch. Gegenden beider Ufer des Niederrheins au Hr. J.P. Edlen von Cobres von K.W. Nose ... (Frankfurt am Mainz, 1789-90).

See: Nose, Karl Wilhelm.

COCHON DE LAPPARENT, Albert-Auguste.

See: Lapparent, Albert-auguste Cochon De.

COLLECTION.

1170. — French, 1793 [Sale catalog].

Collection de minéraux étrangers, dont la majeure partie est de Sibérie, et une suite de coquilles, belle machine électrique, et autres pièces de physique, et differens objets de l'art: qui seront vendus ... le lundi 25 mars 1793, Paris, 1793.

8°: 35 p. VERY SCARCE.

REFERENCES: BL: [F.R.451.(25.)].



COLLINI

COLLINI, Cosimo Alessandro. (BORN: Florence, Italy, 14 October 1727; DIED: Mannheim, Germany, 22 March 1806) *Italian naturalist*.

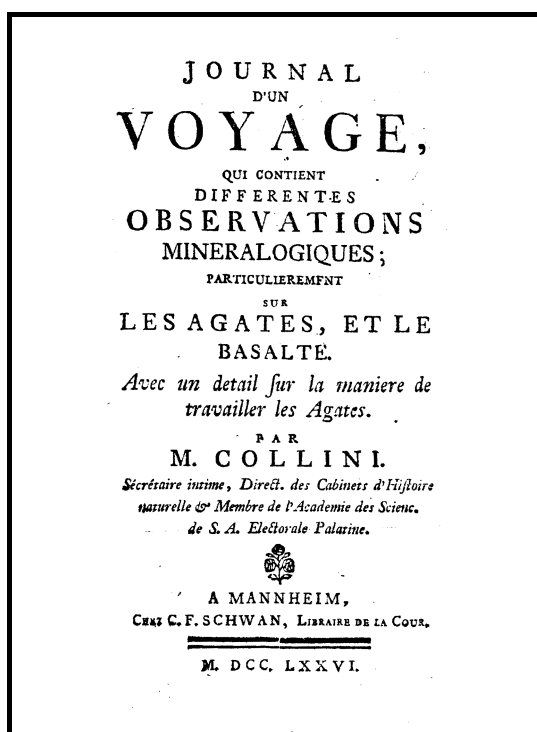
Educated in the law, Collini was Voltaire's secretary in Berlin, before becoming home secretary, historian and director of the mineral cabinet at Mannheim.

REFERENCES: ABI: I 307, 333-336; II 150, 380. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • DBA: II 233, 35. • *Dizionario Biografico Italiano*: 27, 63-5. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • NDB. • Poggendorff: 1, col. 465 & 1551. • WBI.

1171. — French, 1776 [First edition].

Journal | D'Un | Voyage, | Qui Contient | Differentes | Observations | Mineralogiques; | Particulieremfnt [|] | Sur | Les Agates, Et Le Basalte. | Avec un detail sur la maniere de travailler les Agates. | Par M. Collini. | Sécrétaire intime, Direct. des Cabinets d'Histoire naturelle & Membre de l'Academie des Science. | de S.A. Electorale Palatine. | [ornament] | A Mannheim, | Chez C.F. Schwan, Libraire De La Cour. | [double rule] | M. DCC. LXXVI.

8°:)⁽⁶ A-Aa⁸; 198 ℓ .; [i]-xii, [1]-384 p., 14 folding plates. PAGE SIZE: 176 x 104 mm.



JOURNAL D'UN VOYAGE, 1776

CONTENTS: [i-ii], Title page, verso blank.; [iii]-viii, Dedication, signed C. Collini.; [ix]-xii, "Table I Generale." [=contents].; [1]-384, Text.

PLATES: The plates are interspersed in the text. Tab. I (pg. 2), Fossils. Tab. II (pg. 14), Shells and teeth. Tab. III (pg. 16), Shells. Tab. IV (pg. 17), Shells. Tab. V (pg. 17), Shells. Tab. VI (pg. 23), Fossils. Tab. VII (pg. 26), Fossils. Tab. VIII (pg. 29), Factory. Tab. IX (pg. 109), Scenic view. Tab. X (pg. 143), Fossils. Tab. XI (pg. 191), Quartz crystals. Tab. XII (pg. 220), Quartz crystals. Tab. XIII (pg. 232), Lapidaries at work. Tab. XIV (pg. 239), Lapidaries at work.

RARE. The work describes the mineralogical and the geological wonders Collini saw on a trip through Europe. He includes descriptions of the mountains traversed, various agates he finds, mercury and copper mines, manufacturing processes, the working of agates in Oberstein, and observations on volcanoes, basalt and quartz. The plates depict shells, fossils, quartz crystals, cave formations, ancient lapidary methods and scenic views.

REFERENCES: Beckmann P.Ö.B.: 7 (1777), p. 505. • BL: [990.c.21.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 77-8. • Hoover Collection: no. 229. • LKG: XIV 273. • Roller & Goodman, *Catalogue*, 1976: 1, ?? . • Sinkankas, *Gemology Bibliography*, 1993: no. 1412. • Ward & Carozzi, *Geology Emerging*, 1984: no. 496.

1172. German transl., 1777: C. Collini | Tagebuch einer Reise | welches | verschiedene mineralogische Beobachtungen | besonders über die Agate und den | Basalt enthält; | nebst einer Beschreibung der Verarbeitung | der Agate. | [rule] | Aus dem Französischen übersetzt | und mit Anmerkungen begleitet | von | J.S. Schroter. | [...3 lines of titles and memberships...] | [ornate rule] | Mannheim, | bei C.F. Schwan, kuhfürstl. Hofbuchhändler. | 1777.

8°:)(8 A-Nn⁸ Oo⁴; 250ℓ.; [16], [1]-582, [2] p. PAGE SIZE: 180 x 108 mm.

RARE. Translation by JOHANN SAMUEL SCHRÖTER of *Journal d'un Voyage* (Mannheim, 1776).

REFERENCES: *Allgemeine Deutsche Bibliothek*: Anhang, 25-36, p. 1160. • BL: [973.b.15.]. • Friess, *Johann Samuel Schröter*, 1983: 93 [no. 6]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 78. • LKG: XIV 274a. • Sinkankas, *Gemology Bibliography*, 1993: no. 1413.

1173. — French, 1781.

Considerations sur les Montagnes Volcaniques. avec une Table et une Carte ... Mannheim, Chez Schwan et Fontaine, 1781.

4°: 64 p., map. VERY SCARCE.

REFERENCES: Hoover Collection: no. 228. • LKG: XIII 273.

1174. — German, 1783 [German transl.].

Betrachtungen über die vulkanischen Berge. Aus dem Französisch übersetzt. Nebst einer Tabelle über die Gebirge. Dresden, 1783.

8°:

VERY SCARCE. Translation by A.T. von Gersdorf.

REFERENCES: LKG: XIII 274a.

1175. — French, 1805.

Remarques sur la pierre elastique du Bresil et notices sur les marbres flexibles. Mannheim, 1805.

8°: VERY SCARCE.

REFERENCES: LKG: XVI 377.

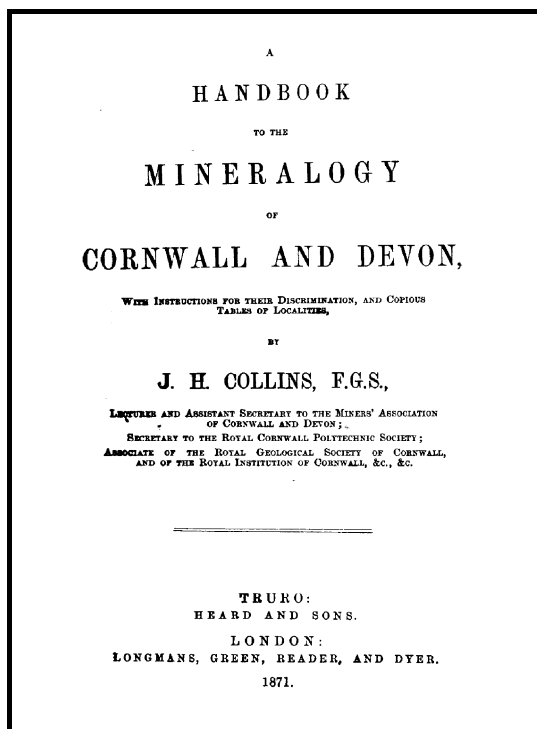
COLLINS, Joseph Henry. (BORN: London, England, 1841; DIED: London, England, 1916) *English mining expert*.

Collins had his early education in Derbyshire, which influenced his life long interest in minerals. He was apprenticed to the sculpture R. Underwood, but instead chose to continue his education. While attending the Royal School of Mines in 1868, Collins together with his classmate, A. LIVERSIDGE successfully carried off one of the Royal exhibitions, much to the embarrassment of the school authorities. In 1869, Collins was offered a position as lecturer and assistant secretary to the Miner's Association of Cornwall and Devon. In accepting the post, he moved to Truro, where he became well versed in the Cornish mining methods. In 1873, Collins returned to London and began working as a consulting engineer. From 1880 to 1884 he was employed in Spain, but returned to London for health reasons. Collins was elected a Fellow of the Geological Society, London in 1869, and he was also instrumental in founding the Mineralogical Society of Great Britain and Ireland in 1876.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 53. • BBA: I 252, 147-153. • Cleavelly, *World Palaeontological Collections*, 1983: 86. • *Mineralogical Magazine*: 18 (1917), 136-8. • *Quarterly Journal of Geological Society of London*: 73 (1917), lx. • Sarjeant, *Geologists*, 1980: 2, 748. • *Transactions of the Institute of Mining & Metallurgy*: 25 (1916), 393-4, portrait. • WBI.

1176. — English, 1871 [First edition].

A | Handbook | To The | Mineralogy | Of | Cornwall And Devon, | With Instructions for their Discrimination, and Copious | Tables of Localities, | by | J.H. Collins, F.G.S. | [...5 lines of titles and memberships...] | [double rule] | Truro: | Heard And



HANDBOOK TO THE MINERALOGY, 1871

Sons. | London: | Longmans, Green, Reader, And Dyer. | 1871.

8°: [11], [1]-108, [2] p., 10 plates interspersed with 5 pages of description, [2] p. PAGE SIZE: 215 x 130 mm.

CONTENTS: [2 pgs], Half title page, "A Handbook | To The | Mineralogy | Of | Cornwall And Devon," verso Truro: | Printed By Heard And Sons, | Boscawen Street."; [2 pgs], Title page, verso blank.; [1 pg], Dedication to Robert Were Fox, F.R.S.; [1 pg], Blank.; [1 pg], "Preface."—dated September 1871.; [1 pg], "List Of Works Consulted."; [1 pg], "List Of Abbreviations Occasionally | Employed."; [1 pg], "Contents."; [1 pg], "Errata."; [1 pg], Blank.; [1]-108, Text.; [2 pgs], "Addenda."; 10 plates interspersed with 5 descriptive pages.; [2 pgs], "List Of Subscribers."

VERY SCARCE. This work intended for students, miners and collectors describes the mineral species found in the peninsula of Cornwall in the north-west of the island of England. This extraordinary area though small in size has produced an abundance of different mineral species. Part one provides a determinative mineralogy, gives a nomenclature of Cornish minerals, provides a systematic overview, distribution in the area and the paragenesis of the species ?? Part two is an alphabetical list of minerals found in Cornwall and Devon.

REFERENCES: BMC: 1, 367. • Dana's 7th (Bibliography): 69.

1177. 2nd edition, 1892: A Handbook to the Mineralogy of Cornwall And Devon ... by J.H. Collins ... Truro & London, 1892.

8°: [11], [1]-108, [2] p., 10 plates interspersed with 5 pages of description, [2] p. VERY SCARCE.

Facsimile reprint, 1969: A handbook to the mineralogy of Cornwall and Devon. Second edition. Truro, Eng., D. Bradford Barton, 1969. [Reprint of the 1892 ed.]

REFERENCES: NUC. • USGS Library Catalog.

1178. — English, 1873 [First edition].

Putman's Elementary Science Series. | [rule] | A First Book Of | Mineralogy. | For Use In | Science Classes And Higher And Middle | Class Schools. | By | J.H. Collins, F.G.S., | [...4 lines of titles and memberships...] | [ornament] | New York: | George P. Putman's Sons, | 182 Fifth Avenue.

8°: A-K⁸; 80ℓ.; [1]-160 p., 159 illus. PAGE SIZE: 168 x 104 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-5, "Preface."—signed J.H.C.; [6], Blank.; [7]-8, "Contents."; [9]-155, Text.; 156-157, "Examination Questions."; [158]-160, "Index."

VERY SCARCE. This is an introductory work to the study of minerals. Part one covers crystallography, chemical properties, blowpipe usage, pseudomorphs, paragenesis, and classification. Part two is a short descriptive mineralogy covering nonmetallic minerals (pp. 88-122) and metallic minerals (pp. 123-155).

Another issue: A First Book in Mineralogy. London & Glasgow, [1873].

REFERENCES: BMC: 1, 367. • USGS Library Catalog.

1179. — English, 1878-83.

Putman's Advanced Science Series. | [rule] | Mineralogy. | By | J.H. Collins, F.G.S., | [...3 lines of previous publications...] | [rule] | Vol. I.—The General Principles Of Mineralogy. | [rule] | With 579 Illustrations. | [ornament] | New York: | G.P. Putnam's Sons, | 182 Fifth Avenue.

2 vols. VERY SCARCE.

REFERENCES: BMC: 1, 367.

COLUMBIA COLLEGE, New York.

1180. — English, 1875 [Bibliography].

Catalogue | Of The | Books And Pamphlets | In The | Library of the School of Mines | Of | Columbia College, | July 1st, 1875. | [rule] | Printed For The Trustees. | [rule] | New York: | John W. Amerman, Printer, | No. 47 Cedar Street. | [short rule] | 1875.

8°: [8], [1]-399, [1] p. PAGE SIZE: 230 x 140 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Preface."—signed John F. Meyer.; [1 pg], Blank.; [1 pg], "Contents."; [1 pg], Blank.; [1 pg], Sectional title page, "Part I. Synthetical."; [1 pg], Blank.; [1]-394, Text.; [395]-399, "Index.; [1 pg], Blank.

VERY SCARCE. It will be seen that the work is divided into two parts: Part I. Synthetical : A., Catalogue of the Systematic Works; B., Catalogue of the Periodical Publications, —wherein these works are arranged in alphabetical order, according to their author or title, and without reference to subjects; and Part II., Analytical; wherein the Systematic Works and Periodical Publications are classified with reference to subjects. Part I. B. will be found to include

a copious Index, in which have been inserted many abbreviated titles, under which some of the more prominent periodicals are at times quoted. Part II. will be found to include a copious Index, the typographical arrangement of which will indicate clearly whether the reference be to a general heading, a sub-heading, or otherwise. This characteristic applies also, and in a larger degree, to the Index in Part I., B. — *Preface*

Contents: Part I. Synthetical: Wherein The Systematic Works And Periodical Publications Are Arranged In Alphabetical Order, Without Reference To Subjects (pp. 1-190). A. Systematic Works (pp. 1-144). B. Periodical Publications (pp. 145-182). Index To Periodical Publications (pp. 183-190). Part II. Analytical: Wherein The Systematic Works And Periodical Publications Are Classified With Reference To Subjects (pp. 195-394). Synopsis Of Classification (pp. 193-194). Index (pp. 395-399).

REFERENCES: NUC. • *USGS Library Catalog*.

COMITIBUS, Ludovicus de. *Italian physician, chemist & mineralogist.*

REFERENCES: LKG: 283.

1181. — Latin, 1665.

[In red:] Metallorum | [in black:] Ac | [in red:] Metallicorum | [in black:] Naturæ Operum | Ex Orthophysicis fundamentis recens | [in red:] Elucidatio | [in black:] Qua Eorum Omnium Principia, Causæ, Proprietates, Generationes; | Generationumque modi apertè ac fideliter enucleantur. | [in red:] Indeque Artis Chemicæ, Theoricæ | Ac Practicæ veritas & ordo revelatur. Methodo breviori, | clariori, diligentiori ac firmiori, quam ab alio quocunque, seu ex veteribus seu ex Recentioribus | hucusque scriptore prælitum fuerit. | [in red:] Opus Sane Cunctis Veritatis | [in black:] | Sæctoribus non minus utile quam gratum. | Avctore | [in red:] Ludovico De Comitibus | [in black:] Maceratensi, Philosophiæ ac Medicinæ Doctore. | [ornament] | Colonia Agrippinæ. | Apud [in red:] Joannem Busæum Bibliopolam, | [in black:] Sub Monocerote. Anno 1665.

8°: 286, [2] p. Title in red and black. RARE.

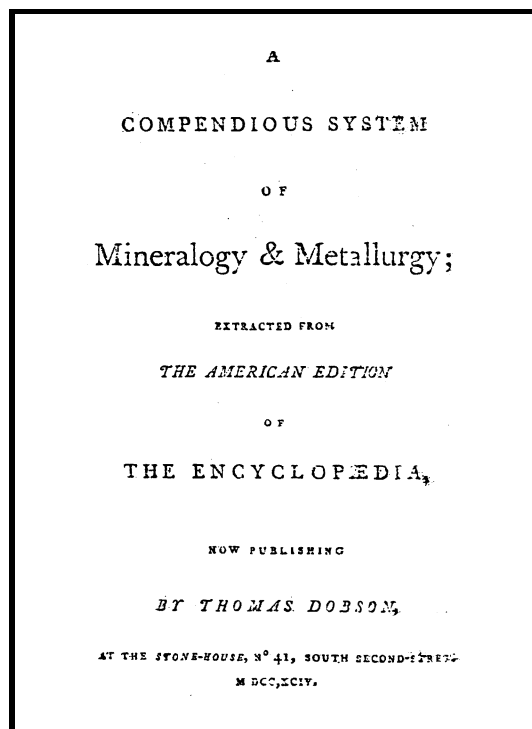
REFERENCES: BL: [987.a.16.]. • Bolton, *Bibliography of Chemistry*, 1893: p. 1012. • CBN: 31, cols. 873-4. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 173. • Gmelin, *Geschichte der Chemie*, 1797-9: 2, p. 21. • LKG: XVI 49. • Schmieder, *Geschichte der Alchemie*, 1927: p. 433. • VD17: 23:295217H.

COMPENDIOUS SYSTEM.

1182. — English, 1794 [First edition].

A | Compendious System | Of | Mineralogy & Metallurgy; | Extracted From | The American Edition | Of | The Encyclopaedia, | Now Publishing | By Thomas Dobson, | At The Stone-House, N° 41, South Second-Street. | M DCC, XCIV.

12°: A² B-Ss⁶ Tt²; 255ℓ.; [i]-iv, [1]-505, [1] p. PAGE SIZE: 176 x 98 mm.



COMPENDIOUS SYSTEM, 1794

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Contents."; [1]-505, Text.; [1 pg], Blank.

RARE. The third edition of the *Encyclopaedia Britannica* (15 vols., London, 1787-97), which included biographical sketches and accounts of historical events, is known to have sold over 13,000 copies in the British Empire. The Philadelphia publisher Thomas Dobson [see note below] thought he saw a business opportunity and issued a call for subscribers for an American version. Part of Dobson's incitement was that all materials from paper and ink to type and binding would be of American origin. This brought out a sufficient subscription and publication began in 1790 and was completed 18 volumes later in 1798. However, from the beginning, the venture was strapped for cash and in late 1793 a fire at Dobson's shop further strained the publisher's finances. Beginning in 1794 several publications appeared that are extracts of long articles from the complete *Encyclopaedia*. These rare books were probably published to help keep Dobson solvent.

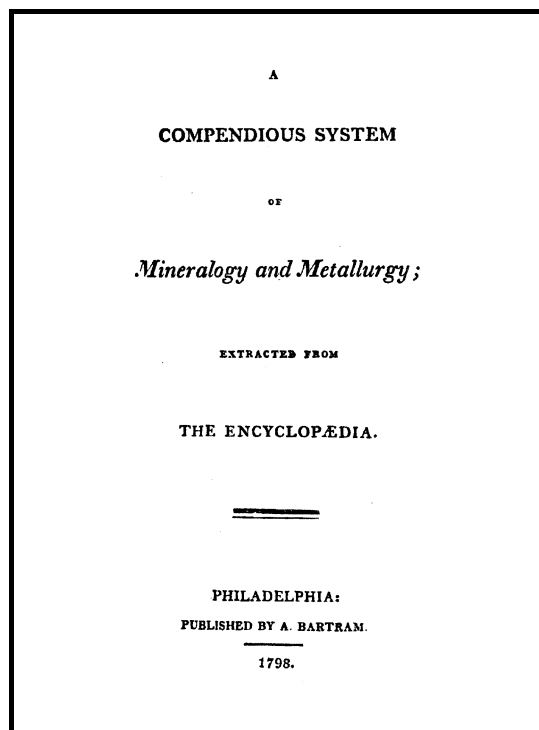
The *Compendious System of Mineralogy and Metallurgy* was one of several books separately published that contain articles from Dobson's *Encyclopaedia*. The original articles were authored by the famous Scottish mineralogist ROBERT JAMESON, and give a good overview and description of the subjects at the end of eighteenth century. Because of its early date this is the first book published on these subjects in America in English and is preceded only by the 1763 German edition of Barba published at Ephrata, Pennsylvania [which see

COMSTOCK

entry under Barba]. The 1798 title edition ranks as the second mineralogical work published in America in English [see next entry]. However, both editions are rare items and infrequently encountered.

Thomas Dobson. (BORN: probably near Edinburgh, Scotland, 1751; DIED: Philadelphia, Pennsylvania, U.S.A., 9 March 1823) *American publisher, printer & bookseller.* Dobson married in Scotland but emigrated to the United States in the spring of 1784. He opened a bookshop in Philadelphia in 1785 and was soon established as one of the leading dealers of medical, professional and scientific books in the United States. In the post Revolutionary period he was noted for printing America editions of recent British publications. To sell his merchandise, he cultivated close relationships with the local scientific societies and the faculty of the University of Pennsylvania, where Dobson met many potential customers. Several set backs through the years caused his business to fail and for Dobson to die in obscurity.

REFERENCES: Arner, R.D., "Thomas Dobson's American Edition of the Encyclopaedia Britannica," in: *Notable Encyclopedias of the Late Eighteenth Century: Eleven Successors of the 'Encyclopédie'*, ed. Frank A. Kafker. New York, 1994, pp. 201-54. • Hazen & Hazen, *American Geological Literature*, 1980: no. 2502. • NUC: 56, 118 [NC 0599857]. • Rink, *Technical Americana*, 1981: no. 770. • Sabin, *Dictionary*, 1868-1936: no. 22555 [complete Encyclopaedia only; Compendius System not listed]. • Walsh, *Anglo-American General Encyclopedias*, 1968: 46. (Dobson) *American Dictionary of Printing & Bookmaking*, 1894.: 146. • ANB: 6, 662-3 [by R.D. Arner]. • Arner, R.D., "Thomas Dobson's Rolling Mill for Copper: A Note on the Publisher of the Encyclopaedia," *Pennsylvania Magazine of History and Biography*, Jan.-Apr., 1994, 117-36. • Drake, *Dictionary of American Biography*, 1872: p. 274. • *New England Galaxy and Masonic Magazine*: 28 (Mar. 1823), 4 [obituary].



COMPENDIOUS SYSTEM, 1798

1183. 2nd edition, 1798: A | Compendious System | Of | Mineralogy and Metallurgy; | Extracted From | The Encyclopedia. | [double rule] | Philadelphia: | Published By A. Bartram. | [rule] | 1798.

12°: A² B-Ss⁶ Tt²; 255ℓ.; [i]-iv, [1]-505, [1] p. PAGE SIZE: 176 x 98 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Contents."; [1]-505, Text.; [1 pg], Blank.

RARE. This title edition is the second mineralogical work published in America in English. The text is divided into 3 parts: I. Introduction (pp. 1-40). II. Mineralogical classification with a descriptive mineralogy (pp. 41-322). III. Metallurgy (pp. 323-505).

REFERENCES: Evans, *American Bibliography*: nos. 4162 & 33676-33693. • Hazen & Hazen, *American Geological Literature*, 1980: no. 2502. • Rink, *Technical Americana*, 1981: no. 771. • Sinkankas, J., "Earliest American Mineralogy," *Mineralogical Record*, 1 (1971), no. 4, 135.

COMSTOCK, John Lee. (BORN: East Lyme, Connecticut, U.S.A., 25 September 1789; DIED: Hartford, Connecticut, U.S.A., 21 November 1858) *American author.*

Little is known of his life until the war of 1812-15. Then he worked as a surgeon in the army and thereafter added M.D. to his name. Comstock was a self educated man, and upon his discharge from military service, he returned to Connecticut where he lived the remainder of his life in Hartford. As a means of livelihood, Comstock prepared texts for the use of schools on a large spectrum of subjects, including chemistry, mineralogy, botany, natural history, geography, and physiology. His *Natural Philosophy* became a standard, and its world wide sales approached nearly a million copies—evenmore remarkable in the nineteenth century, than it is today. It is recorded that Comstock possessed a good mechanical skill that allowed him to construct whatever apparatus might be required in his various studies, and being an able draftsman, create the illustrations used in his numerous books.

REFERENCES: ABA. • *American Chemists & Chemical Engineers*: 2, 46-7 [by W.D. Williams]. • *Appleton Cyclopaedia of American Biography*. • Drake, *Dictionary of American Biography*, 1872: 211. • *Herringshaw's National Library of American Biography*. • *National Cyclopaedia of American Biography*: 1888, ?? • Poggendorff: 3, 293. • WBI.

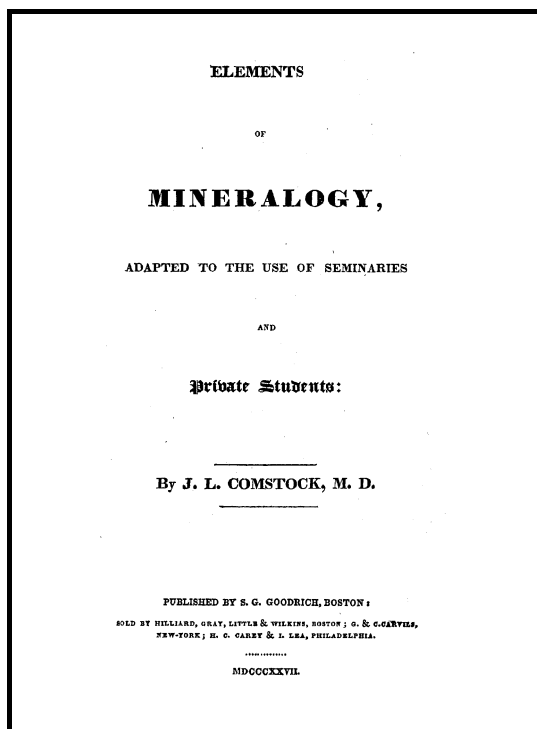
1184. — English, 1827 [First edition].

Elements | Of | Mineralogy, | Adapted To The Use Of Seminaries | And | Private Students: | [rule] | By J.L. Comstock, M.D. | [rule] | Published By S.G. Goodrich, Boston: | Sold By Hilliard, Gray, Little & Wilkins, Boston; G. & C. Carvils, | New York; H.C. Carey & L. Lea, Philadelphia. | | MDCCCXXVII.

8°: [i]-lxxvi, [1]-338, [2] p., illus. PAGE SIZE: 221 x 130 mm.

CONTENTS: [i-ii], Title page, verso "S.G. Goodrich, Publisher, Boston, ..."; [iii]-iv, "Advertisement."—dated Hartford, January 1st, 1826.; [vii]-xi, "Preliminary Explanations."; [x], "Explanations."; [xi]-li, "Introduction."; [lii]-lxii, "Explanation Of Terms, &c. | Commonly used in Mineralogical Descriptions."; [lxiii]-lxvii, "A Table, | Exhibiting the angular admeasurements of crystals by the Reflecting | Goniometer, according to Phillips."; [lxviii]-lxxvi, "Tabular Arrangement."; [1]-298, Text.; [299]-316, "Appendix." [=new minerals].; [317]-320, "Addenda."; [321]-338, "Index."; [1 pg], "Errata."; [1 pg], Blank.

VERY SCARCE. An 1826 a notice in the *American Journal of Science* announced the pending publication



ELEMENTS OF MINERALOGY, 1827

of *A Manual of Mineralogy* by J.L. Comstock in which “the science is illustrated by cuts in the text, and a considerable number of colored engravings ...” Since no copies are recorded in the libraries of the United States or Great Britain, this particular title would seem never to have been published. In the next year, however, Comstock’s *Elements of Mineralogy* did appear, and although containing no plates, colored or plain, the work is illustrated throughout with woodcuts. *Elements* would therefore appear to be the rechristened *Manual* announced in 1826.

Elements is a volume that was designed as a less expensive and weighty alternative to PARKER CLEVELAND’s landmark *Treatise*. It was intended to be used as a textbook in the schools and higher seminars in America, which were instructing students in mineralogy. Therefore, Comstock begins the volume with the basics, including preliminary definitions of mineralogy and geology and the characters of minerals, and continues into slightly expanded definitions of external characters, color, luster, cleavage, transparency, etc. The greater majority of the volume is then given over to the describing of specific mineral species. Comstock described his *Elements* in an advertisement as a volume “... of such a size as to come within the means of almost everyone ... and if well done, [it] would facilitate the progress of science in our country.” It is well worth noting that *Elements* was not kindly received in its only review. Here the anonymous writer berates Comstock for appearing to know little or nothing of the science

of mineralogy and its current state of advancement in America. The review ends with a classic poison pen: “This work is as full of errors of the press, as of the pen, and so far from facilitating the progress of science, carries us back something like ten years.”

Another issue, 1832: *Elements of Mineralogy*. Boston?, 1832. 8°: 343, [1] p., illus.

Another issue, 1841: *Elements of Mineralogy*. Boston?, 1841. 8°: 369, [1] p., illus.

REFERENCES: *American Journal of Science*: 1st series, 10 (1826), 400 [book notice]. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 245.

Introduction

1185. — English, 1832 [First edition].

An | Introduction | To | Mineralogy; | Adapted To The Use Of Schools, | And Private Students. | Illustrated By Nearly Two Hundred Wood Cuts. | [rule] | By John L. Comstock, M.D. | [rule] | Hartford: | Published by B.B. Barber. | [rule] | 1832.

12°: 343 p., illus.

VERY SCARCE. *Introduction to Mineralogy* is written in a similar though distinct style from its forebearer, *Elements*. The first noticeable difference is that the woodcuts are of a cruder, less refined character; however, the cuts do depict the same subjects as did *Elements*. Unlike the earlier work though, *Introduction to Mineralogy* enjoyed for many years a broad popularity as a textbook and fieldguide, which also created its peculiar bibliography. Oddly, *Introduction to Mineralogy* was never reviewed or even noticed in the journals of the period. This fact undoubtedly contributed to its success as it contains many flaws. In addition, no reference to either of Comstock’s works appears in any other American mineralogy. Yet, the legacy of these textbooks is that they were usually the first mineralogical work that exposed American students to the science, and during the gold rush, Comstock’s *Introduction* was a title carried west by many a forty-niner.

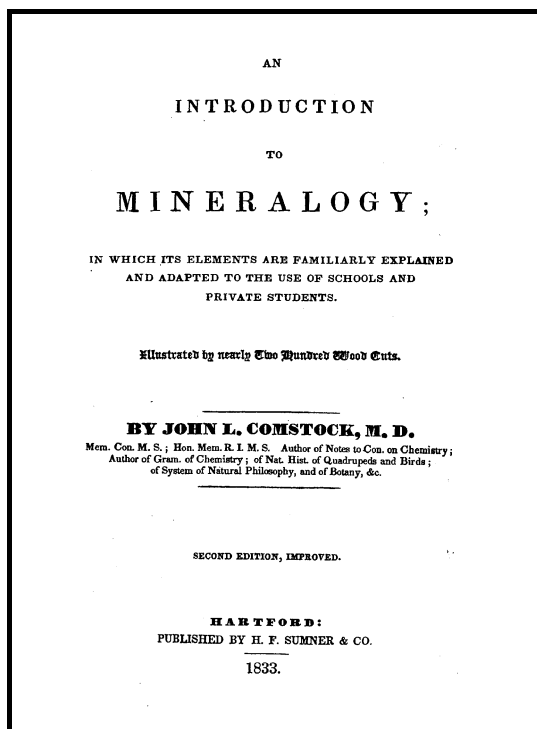
1186. 2nd edition, 1832: An | Introduction | To | Mineralogy; | Adapted To The Use Of Schools, | And Private Students. | Illustrated By Nearly Two Hundred Wood Cuts. | [rule] | By John L. Comstock, M.D. | [rule] | Second Edition, Improved. | [rule] | Hartford: | Published by B.B. Barber. | [rule] | 1832.

12°: [4], [3]-143 (i.e., 343), [1] blank p., illus., index. Page 343 misnumbered 143.

VERY SCARCE. This second edition of *Introduction* appeared the same year as the first, 1832, and contains according to its Advertisement, “more than forty new cuts” and corrections throughout most parts of the volume. This second edition was issued several times with either a new year or new publisher on the title page; however, the pagination of the volume remained the same. Other issues of this edition appeared in:

REFERENCES: Hazen & Hazen, *American Geological Literature*, 1980: no. 2510.

1187. 3rd edition, 1836: An | Introduction | To | Mineralogy; | Adapted To The Use Of Schools, | And Private Students. | Illustrated By Nearly Two Hundred Wood Cuts. | [rule] | By John L. Comstock, M.D. | [rule] | Third Edition,



AN INTRODUCTION TO MINERALOGY, 1832

Improved. | New York: | Published By Robinson, Pratt, & Co. | [rule] | 1836.

12°: 1-30⁶ 31⁵; 185⁴.; [1]-369, [1] p., 186 illus., index. CONTENTS: [1-2], Title page, verso copyright notice; [3], "Advertisement to the second edition"; [4], "Advertisement to the third edition"; [5]-10, "Index"; [11]-342, "Introduction to mineralogy"; [343]-360, "Appendix. Containing the description of minerals not embraced in the body of the work"; [361]-366, "Explanation of terms, & c., commonly used in mineralogical descriptions"; [367]-369, "A table, exhibiting the angular admeasurements of crystals by the Reflecting Goniometer, according to Phillips."; [1 pg], Blank.

SCARCE. This text is divided into two parts. The first is an introduction to mineralogical science. It covers crystallography, predominate forms of crystals, mechanical division of crystal angles, primitive forms, most common forms, double refraction, colors of minerals, luster, hardness, electricity, specific gravity, and chemistry. The second is a descriptive mineralogy which emphasises localities in the United States. Closing the work are an explanation of terms, and a table of goniometric measurements according to WILLIAM PHILLIPS. This is the third, and last revision of the text by the author. Comstock updated the book by additions of new species and an appendix "containing the description of minerals not embraced in the body of the work." Locality information was also updated. Although no other additions or corrections were ever made to the text again, this book was issued over and over until the middle of the nineteenth century. After the eleventh issue, the publisher, perhaps sensing buyer reluctance, replaced the words "Third edition, improved" on the title page, with an edition note [perhaps noting the edition of the title page itself]. The twenty-sixth and probably final "edition" appeared in 1852.

REFERENCES: Hazen & Hazen, *American Geological Literature*, 1980: no. 2511. • NUC: 118, 326-27 [NC 0603823].

CORNWALL, Henry Bedinger. (BORN: Southport, Connecticut, U.S.A., 29 July 1844; DIED: Princeton, New Jersey, U.S.A., 1 April 1917) *American mining engineer & chemist.*

Cornwall was a graduate of Columbia College in 1864, and its School of Mines in 1867 as a mining engineer. From 1865 till 1873, he was an assistant in the School of Mines, with the exception of two years spent in study at the Freiburg Bergakademie. In 1873 he was elected to the chair of analytical chemistry and mineralogy in the school of science of the College of New Jersey. In 1865 he was appointed superintendent of the Continental Zinc and Lead company, of New York. During 1870-'1 he filled a similar office in the General Silver-Mining Company, and spent fifteen months while in their employ examining the Batopilas mines, in Mexico. Cornwall has published numerous scientific papers, and has paid special attention to water-analysis.

REFERENCES: ABA: I 354, 187-195. • Adams, *Dictionary of American Authors*, 1904. • *American Chemists & Chemical Engineers*: 2, 50-2 [by W.D. Miles]. • *Appleton Cyclopedia of American Biography*. • *Herringshaw's National Library of American Biography*. • WBI. • *Who Was Who in America*: 1, ??.

1188. — English, 1882.

Manual | Of | Blowpipe Analysis, | Qualitative And Quantitative, | With | A Complete System | Of | Determinative Mineralogy. | By H.B. Cornwall, | [...2 lines of titles and memberships...] | With Sixty-Nine Wood-Cuts And One Lithograph Plate. | New York: | D. Van Nostrand, Publisher, | 23 Murray and 27 Warren Street. | 1882.

8°: [i]-x, [1]-308, [8] p., one plate, 69 illus.

CONTENTS: [i-ii], Title page, verso "Copyright, | 1882, | By D. Van Nostrand."; [iii]-iv, "Preface."—signed Henry B. Cornwall, August 1882.; [v]-x, "Contents."; [1]-296, Text.; [297], "Symbols And Atomic Weights Of The Elements."; 298-304, "Index To Minerals."; 305-308, "General Index."; [8 pgs], Advertisements.

VERY SCARCE. Cornwall's volume includes the general range of topics usually discussed under the general description of blowpipe analysis. Characterized by the excellent writing that gives full and complete descriptions, the directions for the techniques of manipulation and result interpretation are presented in such a manner that even a beginner could make use of the book.

REFERENCES: *American Journal of Science*: 3rd series, 24 (1882), p. 400. • Bolton, *Bibliography of Chemistry*, 1893: p. 743. • NUC. • NYPL Catalog. • *USGS Library Catalog*.

COVELLI, Niccola. (BORN: 1790; DIED: 1829) *Italian chemist & vulcanologist.*

See: Monticelli, Teodoro Celestino, Abate.

CRAMER, Johann Andreas. (BORN: Quelinburg, Germany, 14 December 1710; DIED: Berggiesshübel, near Dresden, Saxony, Germany, 6 December 1777) *German mining official.*

Cramer first studied law, then from 1734 mining and chemistry. He visited England in 1738 to 1739, then the Erzgebirge in Saxony, becoming in 1743 Kammerrath of mines and smelters for Brunswick at Blankenburg. He lost this post in 1773 through the actions of his enemies. In 1775 he visited the Hungarian mines before returning in 1777 to Germany.

REFERENCES: ADB: 4, 549. • DBA: I 205, 224-234; II 240, 226-227. • DSB: 15, 94. • Ferchl. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 180. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16: 2, 187. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, cols. 493-4. • WBI.

1189. — Latin, 1739 [First edition].

Joann. Andr. Crameri | Elementa | Artis Docimasticæ | Duobus Tomis comprehensa, | Quorum Prior | Theoriam, | Posterior | Praxin, | Ex vera Fossilium indole deductas, atque | indubitata Experimentorum, summâ | cum accuracione institutorum, side sir, | matas, ordine naturali & doctri- | na apertissima exhibit. | Pars Prima | Theoretica. | [ornament] | Lugduni Batavorum, | Apud [two lines braced on both ends:] { Conradum Wishoff, | Georg Jac. Wishoff, Fiz. Cone. } | 1739.

2 vols. [VOL 1] 8°: [VOL 2] 8°: VERY SCARCE.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 35. • Cobres, *Deliciæ Cobresianæ*, 1782: 2, 795-6. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 180. • Wallerius, *Brevis Introductio*, 1779: 77.

1190. 2nd edition, 1744: Elementa Artis Docimasticæ, duobus tomis comprehensa, quorum prior Theoriam, posterior Praxin, ex vera Fossilium indole deductas, atque indubitata Experimentorum, summa cum accuracione institutorum, fide firmatas, ordine naturalilocupletata. Pars Prima Theoretica. Lugduni Batavorum: Apud Conradum Wishoff, et Georg. Jac. Wishoff, 1744.

2 vols. [VOL 1] 8°: [14], 366, [28] p.; [VOL 2] 8°: [18], 380, [10] p., 6 folding plates. VERY SCARCE.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: p. 35. • *Berlinische Sammlungen*: 3, 626. • Cobres, *Deliciæ Cobresianæ*, 1782: 2, 795-96. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 180. • Roller & Goodman, *Catalogue*, 1976: 1, 259. • Wallerius, *Brevis Introductio*, 1779: p. 77.

English editions

1191. English transl., 1741: Elements | Of the Art of | Assaying Metals. | In Two Parts. | The First containing | The Theory, | The Second | The Practice | of the said Art. | The Whole | Deduced from the true Properties and Nature of | Fossils; confirmed by the most accurate and unquestionable Experiments, explained in a | natural Order, and with the utmost Clearness. | By John Andrew Cramer, M.D. | Translated from the Latin. | Illustrated with Copper Plates. | To which are added, | Several Notes and Observations not in the Original, | particularly Useful to the English Reader. | With an Appendix, containing a List of the | Chief Authors that have been published in English | upon Minerals and Metals. | London, | Printed for Tho. Woodward at the Half-Moon between | the Temple-Gates, and C. Davis in Pater-noster-Row, | Printers to the Royal Society. M DCC XLI.

8°: $\pi^1 A^5 B-Z^8 2A-2G^8 2H^7$; 245ℓ.; [12], 1-470, [8] p., 6 plates (numbered Pl. I-VI). PAGE SIZE: 204 x 122 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication to John Winthrop, dated 3 May 1741.; [4 pgs], "Preface."; [1 pg], "Addenda to the Notes."; [1 pg], Errata.; [2 pgs], "Table | Of the Chapters and Titles of the | Theoretical Part of the Art of Assaying."; 1-449, Text.; 450-456, "An | Appendix. | Containing a List of the chief Authors in | English, who have treated of Minerals | and Metals. By the Author of the | Notes."; 457-470, "Explanation | Of The | Figures."; [8 pgs], "Index."

ELEMENTS

Of the ART of

Assaying METALS.

IN TWO PARTS.

The First containing

THE THEORY,

The Second

THE PRACTICE

of the said ART.

THE WHOLE

Deduced from the true Properties and Nature of Fossils; confirmed by the most accurate and unquestionable Experiments, explained in a natural Order, and with the utmost Clearness.

By JOHN ANDREW CRAMER, M. D.

Translated from the LATIN.

Illustrated with COPPER PLATES.

To which are added,

Several Notes and Observations not in the Original, particularly Useful to the English Reader.

With an APPENDIX, containing a List of the chief AUTHORS that have been published in English upon MINERALS and METALS.

LONDON,

Printed for TRO. WOODWARD at the Half-Moon between the Temple-Gates, and C. DAVIS in Pater-noster-Row, Printers to the ROYAL SOCIETY. M DCC XLI.

ELEMENTS, 1741

PLATES: The six engraved plates show various apparatus and techniques in assaying. Each is signed J. Mynde sc. They consist of: Plates I-III, showing various apparatus. Plate IV show furnaces. Plate V, depict bellows, scales, weights. Plate VI, renders a storage diagram for a glass furnace.

SCARCE. Translation of *Elementa Artis Docimasticæ* (1st ed., Leipzig, 1739), the most famous metallurgical textbook of its time. Cramer was the best assayer of his time, and he brings all of his practical experience into his books. It was the first work to reduce the art of assaying in metallurgy into a system, and Cramer's textbook is the first of its kind. It divides the subject into two sections: one theoretical, the other practical. Cramer acknowledges the prior work in the area of Agricola, Ercker and Stahl. Cramer was the first to recommend the use of the blowpipe in assaying small quantities of ores on a charcoal block with borax acting as a flux. He describes his blowpipe as being made of copper with a ball included to condense moisture in the breath. Cramer is equally meticulous in describing the other tools of the trade, many of which are depicted on some of the finely engraved plates.

REFERENCES: ADB: 4, 547-9. • Beekman, *Systematische Mineralogie*, 1906: p. 35. • Cobres, *Deliciæ Cobresianæ*, 1782: 2, 795-96. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 180. • *Freilich Sale Catalog*: no. 134. • Hoover Collection: no. 239. • Kopp, *Geschichte der Chemie*, 1843-7: 2, 44 & 4, 157. • Partington, *History of Chemistry*, 1961-70: 2, 710-1. • Roller & Goodman, *Catalogue*, 1976: 1, 259. • Wallerius, *Brevis Introductio*, 1779: p. 77.

1192. English transl., 1764: Elements of the Art of Assaying Metals. In two parts ... The second edition, corrected, London, Printed for L. Davis and C. Reymers, 1764.

xxiv, 471, [1] p., 6 folding plates. VERY SCARCE.

REFERENCES: Hoover Collection: no. 239. • Roller & Goodman, *Catalogue*, 1976: 1, 259.

German editions

1193. German transl., 1746: Anfangsgründe der Probierkunst. Nach der andern verb. Ausgabe aus dem Lateinischen ins Deutsche übersetzt von C. E. Gellert. Stockholm, Kieseewetter, 1746.

2 vols. [VOL 1] 8^o: 32, 320 p., 6 plates.; [VOL 2] 8^o: [18], [323]-682, [22] p.

VERY SCARCE. Translation of Cramer's *Elementa Artis Docimasticæ*.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: p. 35. • Cobres, *Deliciae Cobresianæ*, 1782: 2, 795-96. • Darmstädter, *Berg-Büchlein*, 1926: 202. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 180. • Freilich Sale Catalog: no. 135. • Hoover Collection: no. 238. • Partington, *History of Chemistry*, 1961-70: 1, 493-4. • Wallerius, *Brevis Introductio*, 1779: p. 77.

1194. German transl., 1766: Anfangsgründe der Probierkunst. Nach der andern verb. Ausgabe aus dem Lateinischen ins Deutsche übersetzt von C. E. Gellert. 2. Aufl. 2 Bde. Leipzig, Heinsius, 1766.

2 vols. [VOL 1] 8^o: 32, 320 p., 6 plates.; [VOL 2] 8^o: [18], [323]-682, [22] p.

VERY SCARCE. Translation of Cramer's *Elementa Artis Docimasticæ*.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: p. 35. • Cobres, *Deliciae Cobresianæ*, 1782: 2, 795-96. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 180. • Freilich Sale Catalog: no. 136. • Wallerius, *Brevis Introductio*, 1779: p. 77.



ANFANGSGRÜNDE DER METALLURGIE, 1774

1195. German transl., 1774-7: Anfangsgründe | Der | Metallurgie, | darinnen die Operationen | so wohl | im kleinen als großen Feuer | ausführlich beschrieben | und | mit deutlichen Gründen und Erläuterungen | und | XLIII Kupfertafeln begleitet sind, | in dreyen Theilen verfaßt | durch | Johann Andreas Cramer. | [vignette]

Erster [-Dritter] Theil | mit XIX Kupfertafeln und deren Erklärung. | [rule] | Blankenburg und Quedlinburg, | bey Christoph August Reußner 1774.

3 parts. [Part 1: 1774] 4^o:)(4 A-2Q4 2R-2U2)(4)(4)(4)(4; 178ℓ.; [1]-8, [1]-312, [36] p., 19 plates (folding); [Part 2: 1775] 4^o: π¹ a⁴ A-2D4 2E2 2F1)(2)(1; 119ℓ.; [2], [I]-VIII, [2], [1]-212, [16] p., 2 plates.; [Part 3: 1777] 4^o: π² A-T4 U3; 81ℓ.; [4], [1]-156, [2] p., 20 plates. PAGE SIZE: 330 x 182 mm.

CONTENTS: [Part 1] [1-2], Title page, verso blank.; [3]-8, "Vorrede des Verfassers."; [1], Sectional title page, "Anfangsgründe | der | Metallurgie."; [2], Blank.; [3]-312, Text.; [16 pages], "Register über der Metallurgie ersten Theil."; [20 pgs], "Erklärung der Kupfertafeln."; [At end], 19 plates.

[Part 2] [2 pgs], Title page, verso blank.; [I], "Nacherinnerung | des Verlegers | zum dem | Zwayten Theil | der | Cramerschen Metallurgie."; [II], Blank.; III-IV, "Vorrede | des Verfassers zum zweyten Theile."; V-VIII, "Inhalt | des zweyten Theils."; [1 pg], Sectional title page, "Anfangsgründe | der | Metallurgie | Zwayter Theil."; [1 pg], Blank.; [1]-212, Text.; [10 pgs], "Register über der Metallurgie zweyten Theil."; [6 pgs], Description of plates.

[Part 3] [2 pgs], Title page, verso blank.; [2 pgs], "Avertissement | des Cammerrath Cramer unter der Presse seyende | Metallurgie betreffend."; [1], Sectional title page, "Anfangsgründe | der | Metallurgie. | Dritter Theil."; [2], Blank.; [3]-156, Text.; [1 pg], "Druckfehler."; [1 pg], Blank.; [At end], 20 plates.

VERY SCARCE. The last edition of the famous *Elementa Artis Docimasticæ* (1st ed., Leipzig, 1739) to be revised by the author. It has been expanded and revised through out by Cramer's significant additions to the original text and the inclusion of a third section describing metallurgical processes on a large, industrial scale. Many more plates showing equipment and processes have also been added, and while the title page of the third part calls for 22 plates, only 20 appear to have been issued.

French edition

1196. French transl., 1755: Elemens | De | Docimastique, | Ou | De L'Art Des Essais, | Divisés En Deux Parties; | La premiere Théorique, & la seconde Pratique: | Traduit du Latin de M. Cramer. | Tome Premier. | [ornament] | A Paris, | Chez Briasson, Libraire, rue Saint Jacques, | à la Science. | [double rule] | M. DCC. LV. | Avec Approbation & Privilège du Roi.

4 vols. [VOL 1] 12^o: [VOL 2] 12^o: [VOL 3] 12^o: [VOL 4] 12^o:

VERY SCARCE. Translated by J.-F. de Villiers.

CRICHTON, Alexander. (BORN: Edinburgh, Scotland, 2 December 1763; DIED: The Grove near Sevenoaks, Kent, England, 4 June 1856) *English physician.*

Crichton recieved his M.D. from Leyden in 1785. He perfected his medical skills by studying throughout Europe. In 1804 came an appointment as personal physician to Tsar Alexander I of Russia. Upon retiring from this post, he returned to England. Crichton wrote several books dealing with medical and geological subjects, and held membership in many societies, including F.L.S., 1793, F.R.S., 1800 & F.G.S, 1819. While living in Russia he continued to add to his mineral collection begun years before. It eventually consisted of over 4,000 specimens of the highest quality from localities throughout the world

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • Appleby, J.H., "Sir Alexander Crichton, F.R.S. (1763-1856), imperial Russian physician at large," *Notes and Records of the Royal Society*, 53 (1999), no. 2, 219-30. • BBA: I 282, 363. • Boase, *Modern English Biography*, 1892-1921. • Cleavelly, *World Palæontological Collections*, 1983:

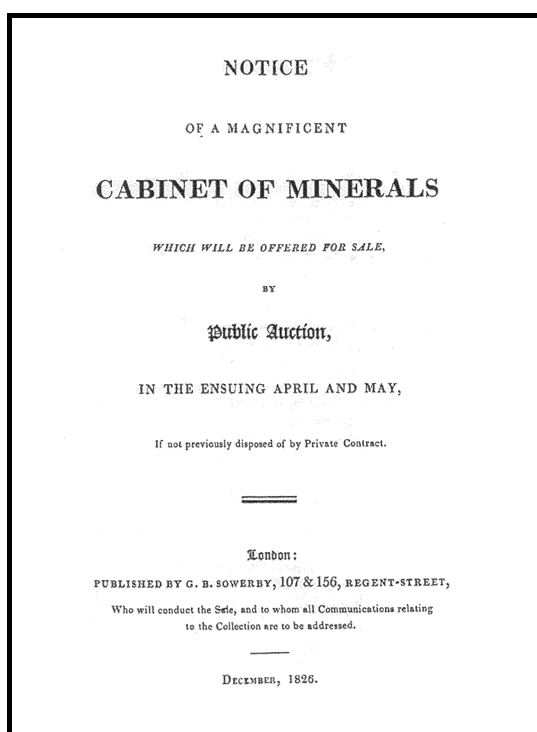
91. • DNB: 13, 85 [by G.C. Boase]. • Finger, S. and H.W. Buckingham, "Alexander Crichton (1763-1856). Discoverer of fluent speech and associationist theory," *Archives of Neurology*, 51 (1994), no. 5, 498-503. • Munk, W., *The roll of the Royal College of Physicians of London*. 2nd edition. London, 1878. 3 vols. • Poggendorff: 3, 1896. • *Quarterly Journal of Geological Society of London*: 13 (1857), lxiv-lxvi. • Tansey, E.M. "The life and works of Sir Alexander Crichton, F.R.S. (1763-1856): a Scottish physician to the Imperial Russian Court," *Notes and Records of the Royal Society of London*, 38 (1984), no. 2, 241-59. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 46, 47, 56, 80 & 81-2.

Notizen über die Mineralien-Sammlung Sr. Excellenz Des Herren Dr's Alexander's Von Crichton, ... Von Joseph Friedrich Wagner (Moskwa, 1818).

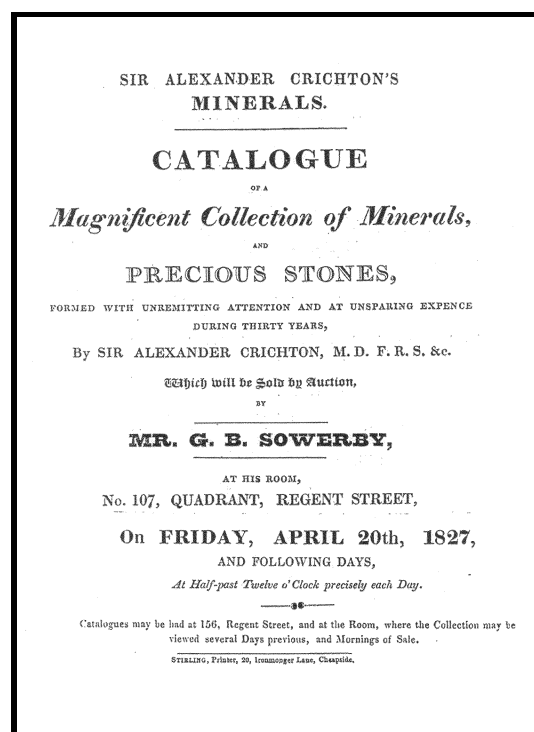
See: Wagner, Joseph Friedrich.

RARE. This notice was printed in anticipation of a unique auction of minerals in the upcoming spring. Crichton had decided to retire from public life, and he commissioned G.B. Sowerby [see note below] to sell his large mineral collection. Efforts were made by Sowerby to sell the accumulation en block, but no purchaser was forthcoming. This notice was published to tantalize prospective bidders at the auction to be held in the coming spring. It lists highlights of the collection, most notably rare crystallized specimens from Russia.

George Brettingham Sowerby. (BORN: 12 May 1788; DIED: 26 July 1854) *English conchologist, natural history dealer & artist-publisher*. Sowerby assisted his father in the preparation and publication of various natural history works, including *Mineral Conchology* (London, 1812-22) and *The Genera of Recent and Fossil Shells* (London, 1820-34).



NOTICE OF A MAGNIFICENT CABINET, 1826



SIR ALEXANDER CRICHTON'S MINERALS, 1827

1197. — English, 1826 [Sale notice].

Notice | Of A Magnificent | Cabinet Of Minerals
| Which Will Be Offered For Sale, | By | Public
Auction, | In The Ensuing April and May, | If
not previously disposed of by Private Contract.
| [double rule] | London: | Published By G.B.
Sowerby, 107 & 156, Regent-Street, | Who will
conduct the Sale, and to whom all Communications
relating | to the Collection are to be addressed. |
[rule] | December, 1826.

8°: [1]-23, [1] p. PAGE SIZE: 180 x 105 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], "Notice,
&c."; [4], Blank.; [5]-23, Text.; [1 pg], Advertisement.

1198. — English, 1827 [Sale catalog].

Sir Alexander Crichton's | Minerals. | [rule] |
Catalogue | of a | Magnificent Collection of
Minerals, | and | Precious Stones, | Formed With
Unremitting Attention And At Unsparing Expence
| During Thirty Years, | By Sir Alexander Crichton,
M.D. F.R.S. &c. | Which will be Sold by Auction,
| by | [rule] | Mr. G.B. Sowerby, | [rule] | At
His Room, | No. 107, Quadrant, Regent Street,
| On Friday, April 20th, 1827, | And Following
Days, | At Half-past Twelve o'Clock precisely each

CRONSTEDT

Day. | [ornate rule] | Catalogues may be had at 156, Regent Street, and at the Room, where the Collection may be | viewed several Days previous, and Mornings of the Sale. | [rule] | Stielling, Printer, 20, Ironmonger Lane, Cheapside.

8°: [1]-128 p. PAGE SIZE: 215 x 170 mm.

CONTENTS: [1-2], Title page, verso "Conditions of Sale."; [3]-128, Text.

RARE. A lengthy sale catalog containing 2,600 lots of minerals. The sale was held over 16 days, and major purchasers included J.H. HEULAND and the British Museum. Based upon the writing of the catalogue entries, Embry (1976) speculates this catalog was prepared with Heuland's assistance.

REFERENCES: Chalmers-Hunt, *Natural History Auctions*, 1976: 43.

CRISTOFORI, Giuseppe de.

1199. — Italian, 1832 [Collection catalog].

Cataloghi Sistematici e Descrittivi degli oggetti di Storia Naturale esistenti nei Museo di G. De Cristofori e Prof. G. Jan. Sezicae quarta. Prima Divisione. Mineralogia. Milano, G. Pirotta, 1832.

8°: 48 p.

VERY SCARCE. Co-authored with Giorgio Jan. This is one part of a general description of a large natural history collection that described in other publications the insects, plants, animals, shells, etc. This part contains the listing of the minerals.

REFERENCES: Partsch, *Katalog der Bibliothek*, 1851: no. 464a.



CRONSTEDT

CRONSTEDT, Axel Fredrik. (BORN: Stropsta, Turinge Parish, Södermanland, Sweden, 23 December 1722; DIED: Säter, Sweden, 19 August 1765) *Swedish mineralogist & chemist.*

Cronstedt studied mathematics at Uppsala, where he came under the influence of J.G. WALLERIUS and S. RINMAN and became interested in mining and mineralogy. He served in the Swedish army from 1741 to '43, but

afterwards, he became a mining expert by visiting the various mines and smelters throughout Sweden. In 1747, He was appointed assistant to D. TILAS, before becoming in 1748, director of the East and West Bergslagen mining district. Cronstedt discovered the element Nickel while analyzing the mineral "kupfernickel" [niccolite] in 1751. He is also among the first researchers to use the blow-pipe in mineral analyses, generating better results than anyone up to that time. Berzelius said of him, "Cronstedt, the founder of the chemical system of mineralogy, a man who by his acuteness in that science rose so far above his age that he was never correctly understood by it." During his life he accumulated a large mineral collection of 3,000 items which was inherited by his son. The collection and its manuscript catalog were purchased by a wealthy Danish landowner and collector who moved it to Paris where it was lost. Cronstedt was elected in 1754 a member of the Kungliga Vetenskaps Akademiens, Stockholm (Academy of Sciences, Stockholm), and the mineral "Cronstedtite" was named in his honor by J. Steinmann in 1821.

REFERENCES: Almquist, *Bergskollegium*, 1909: p. 187.

• Barstow, V., "Axel Fredrik Cronstedt," *Journal of Chemical Education*, 30 (1953), 247-52. • DSB: 3, 473-4 [by Uno Bokuland]. • Forsstrand, C., *Sven Rinman, Minnesteckning*. Stockholm, 1920. • Lambrecht & Quenstedt, *Catalogus*, 1938: 96. • Lindroth, *Swedish Men of Science*, 1952: 92-104 [by N. Zenzén]. • Nordenskiöld, A.E., *Minnesteckning öfver Axel Fredrik Cronstedt*. Stockholm, dagblad 1 April 1882. • Nordin-Pettersson, *Konstsamlingar*, 1971: 353. • Poggendorff: 1, col. 499. • Rinman, S., *Äminnelsetal öfver Axel Fredrik Cronstedt, hållet den 6 mars 1766*. Stockholm, 1766. • Sahlén, C., *Hist. översikt öfver sv. Bergsmannasammanslutningar*. Stockholm, 1920. • Sarjeant, *Geologists*, 1980: 2, 781-2. • SBA: Scandinavian Biographical Archive: B-049, 284-287. • *Svenskt Biografiskt Handlexikon*: 1, 201. • *Svenskt Biografiskt Lexikon*: 9, 279-95, portrait, bibliogr. [by N. Zenzén]. • Thomas, *Dictionary of Biography*, 1884: 694. • WBI. • *World Who's Who in Science*: 389. • Zenzén, *Bergskollegii Mineralsamling*, 1921.

1200. — Swedish, 1754.

Intrades-tal, om Medel til mineralogiens vidare forkofran / hallit for Kongl. Svenskavetenskaps Akademien den 9. Feb. 1754 af Axel F. Cronstedt ... Stockholm, Tryckt hos Lars Salvius, 1754.

8°: [2], 16 p. With title-vignette, engraved, head- and tailpieces, initials.

RARE. Cronstedt's announce of his discovery of the new element nickel.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 45. • *Göttingische gelehrte Anzeigen*: 1754, 736. • LKG: XII 39. • Weeks, *Discovery of the Elements*, 1934: p. ??.

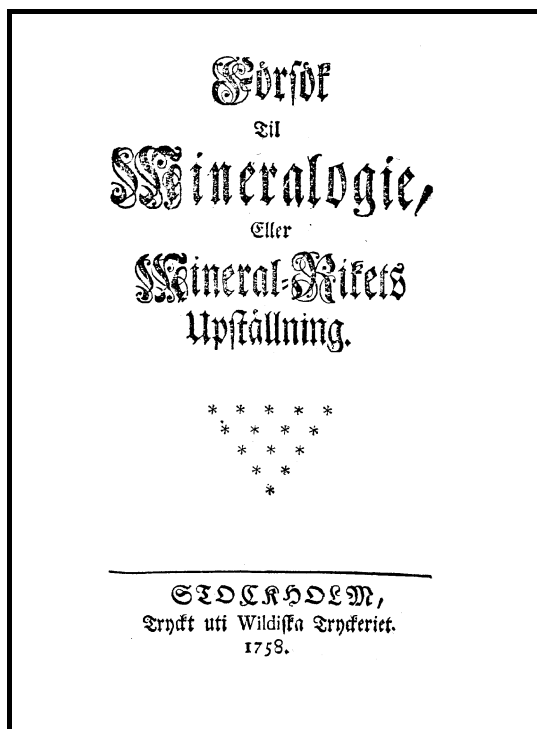
Swedish editions

1201. — Swedish, 1758 [First edition].

Försök | Till | Mineralogie, | Eller | Mineral=Rikets | Upställning. | [Ornament: inverted triangle of *] | [rule] | Stockholm, | Tryckt uti Wildiska Tryckeriet. | 1758.

8°: π^2)⁽⁸⁾)()⁽⁸⁾)()⁽²⁾ A-P⁸ Q⁶; 146ℓ.; [40], [1]-251, [1] p., printer's device, page 251. PAGE SIZE: 162 x 100 mm.

CONTENTS: [2 pgs], Title page, verso "Imprimatur. N. von Oelreich."; [15 pgs], "Företal."; [23 pgs], "Inwising til föliande Mineralogie." [=synopsis of the mineral system]; [1]-251, Text.; [1 pg], Blank.



FÖRSÖK TILL MINERALOGIE, 1758

SCARCE. Published anonymously. This is one of the most important and influential works in mineralogy. By precise chemical analysis, Cronstedt first realized that every mineral is created from a specific set of chemical constituents; he further realized that the chemical uniqueness of minerals formed an ideal concept on which a system mineralogy could be built. Pursuing this insight with all his great skill and perseverance, he applied every test at his disposal to determine a mineral's chemical composition more accurately than had any other previous investigator. In fact, Cronstedt was so successful using the blowpipe in making his determinations that he can rightly be called the founder of systematic blowpipe analysis. Using the results of his various tests, Cronstedt arranged minerals according to their contained chemical elements, thus creating the first mineralogical system to rely almost exclusively on chemical determinations. This new method had very wide appeal among mineralogists, and many subsequent systems would copy Cronstedt's lead. Another innovation was to distinguish, for the first time, between true minerals of homogeneous chemical composition and rocks, which are a mixture of several minerals; the later, together with fossils, the author separately classified in an appendix.

REFERENCES: Dana's 7th (Bibliography): 69. • *Freilich Sale Catalog*: no. 137. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 45. • Ward & Carozzi, *Geology Emerging*, 1984: no. 549.

1202. 2nd edition, 1781: [Contained within a double rule border:] Försök | till en | Mineralogie, | eller | Mineral



FÖRSÖK TILL EN MINERALOGIE, 1781

Rikets | Upställning. | [vignette] | Andra Uplagan Förbättrad. | [rule] | Stockholm. | Tryckt hos Johan Arv. Carlbohm 1781. | på Förläggarens belösnad.

8°: π^1 (-3)(8 A-T8; 176*l.*; [49], [1], [1]-302, [2] p., printer's device page 302, engraved title page, title vignette. PAGE SIZE: 193 x 115 mm. uncut. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [18 pgs], "Företal."; [29 pgs], "Invisning til följande Mineralogie."; [1 pg], Blank.; [1]-302, Text.; [1 pg], "Kättelser."; [1 pg], "Förteckning på Böcker, som sinnas uti Joh. Arbores Boklåda wid Stora Nygatan i Stockholm."

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 39-44. • Dana's 7th (Bibliography): 69. • DSB: 3, 474-75. • Fischer, *Mineralogie in Sachsen*, 1939: 115-16, 139, 152 & 248. • LKG: XII 40. • Wallerius, *Brevis Introductio*, 1779: 95. • Zittel, *History of Geology*, 1901: p. 122.

German editions

1203. Translation, First edition, 1760: Versuch | einer neuen | Mineralogie | aus dem Schwedischen übersetzt. | [Ornament with initials RH included, 38 x 68 mm.] | Kopenhagen, | auf Kosten der Rothenschen Buchhandlung | 1760.

8°: a-b⁸ c⁴ A-Q⁸ R⁴; 152*l.*; [40], [1]-264 p.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorbericht."; [25 pgs], "Vorrede des Verfassers."; [11 pgs], "Einleitungs-Tabelle ins Mineralreich."; [1]-264, Text.

VERY SCARCE. Translated by G. Widemann from *Försök till Mineralogie* (Stockholm, 1758).

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 45. • *Leipziger gelehrte Zeitung*: 1760, 481. • Roller & Goodman, *Catalogue*, 1976: 1, 262.

1204. Translation, 2nd edition, 1770: Cronstedts | Versuch | einer | Mineralogie. | [ornate rule] | Vermehrt | durch Brünlich. | [ornament] | [rule] | Copenhagen und Leipzig, | verlegt C.G. Probst und Rothens Erben. | 1770.

8°: a-b⁸ c⁴ A-S⁸ T⁴; 168*l.*; [40], [1]-296 p. PAGE SIZE: 170 x 102 mm.

CRONSTEDT

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorberischt | des Herausgebers."—signed M.Th. Brünnich, 14 March 1770.; [22 pgs], "Vorrede | des Verfassers."; [12 pgs], "Einleitungstabelle | ins | Mineralreich."; [1]-296, Text.

VERY SCARCE. Translated by MORTEN THRANE BRÜNNICH.

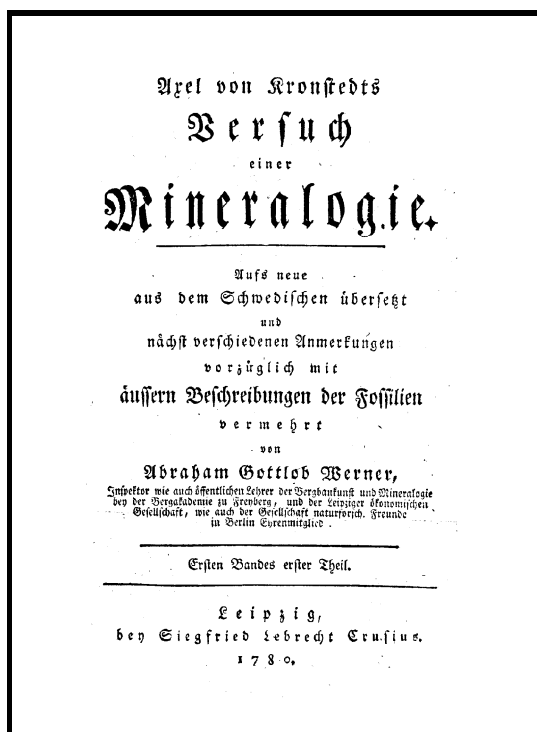
REFERENCES: *Berlinische Sammlungen*: 3, 653. • Dana's 7th (Bibliography): 69. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • *Göttingische gelehrte Anzeigen*: 1770, 695. • LKG: XII 42 & 45. • Roller & Goodman, *Catalogue*, 1976: 1, 262.

1205. Translation, 3rd edition, 1775: Cronstedts | Versuch | einer | Mineralogie. | [ornate rule] | Vermehret | durch | Brünnich. | [ornament] | [rule] | Gedruckt bey den Widmanstätterischen Erben | Grätz 1775.

8°: xxxiv, 250 p.

VERY SCARCE. Translated by Mortane Thrane Brünnich. Perhaps published as a pirate edition from the 1770 German edition.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 262.



VERSUCH EINER MINERALOGIE, 1780

1206. Translation, 4th edition, 1780: Axel von Cronstedts | Versuch | einer | Mineralogie. | [rule] | Aufs neue | aus dem Schwedischen übersetzt | und | nächst verschiedenen Anmerkungen | vorzüglich mit | äussern Beschreibungen der Fossilien | vermehrt | von | Abraham Gottlob Werner, | [...4 lines of titles and memberships...] | [rule] | Ersten Bandes erster Theil. | [rule] | Leipzig, | bey Siegfried Lebrecht Crusius. | 1780.

8°: a-d⁸ e⁴ A-Q⁸ R³; 167ℓ.; [72], [1]-254, [8] p. PAGE SIZE: 202 x 120 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [10 pgs], Dedication, signed Abraham Gottlob Werner, 20 March 1780.; [30 pgs], "Vorrede | des Uebersetzers," signed

A.G. Werner, 20 March 1780.; [20 pgs], "Vorrede | des Verfassers."; [10 pgs], "Einleitungs=Tafel | zu | dem ersten Theile | dieser | Mineralogie."; [1]-254, Text.; [5 pgs], "Mineral=System | des Uebersetzers."; [1 pg], Blank.; [2 pgs], "Verbesserungen."

VERY SCARCE. A partial translation of the 1758 Swedish edition. Believing that Cronstedt's work represented the best chemical classification available, the noted mineralogist, Abraham Gottlob Werner translated the section dealing with earths and stones; however, Werner so expanded the work by incorporating his own theories on the external characteristics of minerals that this translation rapidly became accepted throughout Europe as the best reference and textbook of contemporary mineralogical science.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 46, 471. • *Allgemeines Verzeichniss neuer Bucher*: 5 (1781), 277. • *Berlinische Sammlungen*: 3, 653. • Dana's 7th (Bibliography): 83. • *Freilich Sale Catalog*: no. 138. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • Hoover Collection: no. 241. • *L'Esprit des Journaux*: 10 (1781), 393. • LKG: XII 41 & 43. • Roller & Goodman, *Catalogue*, 1976: 1, 262. • Ward & Carozzi, *Geology Emerging*, 1984: no. 552.

French edition

1207. French transl., 1771: Essai | d'une nouvelle | minéralogie. | Traduit du Suédois & de l'Allemand | de M. Wiedman, &c. &c. | Par M. Dreux fils, | Apothicaire | de l'Hôtel-Dieu de Paris. | [rule] | Prix 5 liv. relié. | [rule] | [ornament] | A Paris, | Chez P.Fr. Didot le jeune, Libraire, | Quai des Augustins. | [double rule] | M. DCC. LXXI. | Avec Approbation, & Privilège du Roi.

8°: π² a-b⁸ c² A-Z⁸ 2A⁸ 2B⁴; 216ℓ.; [4], [i]-xxxvj, [1]-389, [3] p. PAGE SIZE: 165 x 100 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication to "Monseigneur Bertin."; [i]-xiv, "Avant-Propos."; [xv]-xxxvj, "Preface | De L'Auteur."; [1]-372, Text. [373]-389, "Table" [=table of contents.]; [2 pgs], "Approbation."; [1 pg], Publisher's catalog.

SCARCE. Translation by P.F. Dreux from *Versuch der Mineralogie* (Leipzig, 1760).

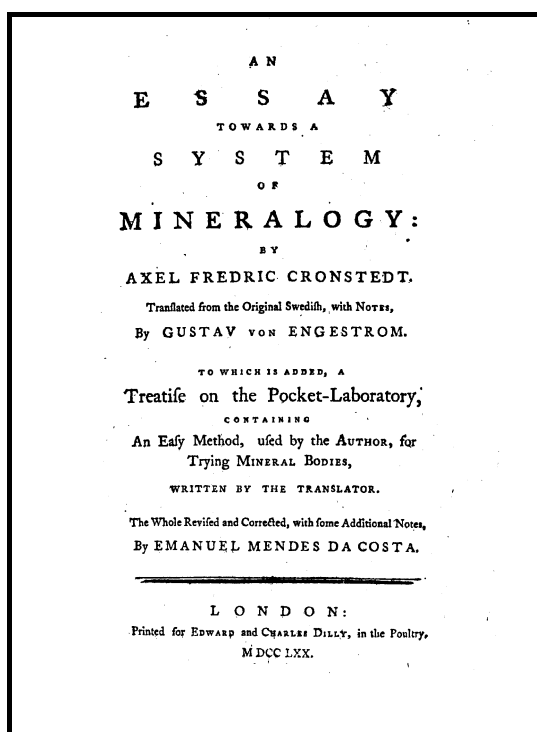
REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • LKG: XII 44.

English editions

1208. Translation, First edition, 1770: An | Essay | towards a | System | of | Mineralogy: | By | Axel Frederick Cronstedt. | Translated from the Original Swedish, with Notes, | By Gustav von Engström. | To which is added, a | Treatise on the Pocket-Laboratory, | containing | An Easy Method, used by the Author, for | Trying Mineral Bodies, | written by the translator. | The Whole Revised and Corrected, with some Additional Notes, By Emanuel Mendes da Costa. | [double rule] | London: | Printed for Edward and Charles Dilly, in the Poultry. | M DCC LXX.

8°: π² a-b⁸ c² B-X⁸ Y⁴ Z²; 185ℓ.; [4], i-xxxv, [1], [1]-272, [2], 175-188 [...] 289-329, [1] p., 2 folding plates showing blow-pipes. Pages 189 to 288 omitted in the blow-pipe treatise of Engström. PAGE SIZE: 210 x 130 mm.

CONTENTS: [2 pgs], Half title page, "An | Essay | Towards A | System | Of | Mineralogy," verso blank.; [2 pgs], Title page, verso blank.; i, "Mr. Da Costa's | Preface."; ii-iv, "The | Translator's | Preface."; v-xxi, "The | Author's | Preface."; [xxii], Blank.; xxiii-xxxv, "The | Contents."; [1 pg], "Errata."; [1]-272, Text of Cronstedt treatise.; [1 pg], "Description and Use | of a | Mineralogical Pocket Laboratory; | and especially the | Use of the Blow-pipe | in | Mineralogy. | By Gustav von Engström."; [1 pg], Blank.; 175-188 [...continues...] 289-318, "Description of a Mineralogical Pocket Laboratory, &c."; 319-329, "An | Alphabetical Table | Of Different | Minerals, | with the | Swedish and German Names added thereto, | ..."; [1 pg], Blank.; [Contained in the Cronstedt treatise], 2 folding plates, pages 178 and 181.



ESSAY TOWARDS A SYSTEM, 1770

VERY SCARCE. English translation by Gustav von Engeström and edited by Emanuel Mendes da Costa from *Försök Till Mineralogie, Eller Mineral-Rikets Upställning* (Stockholm, 1758).

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • Roller & Goodman, *Catalogue*, 1976: 1, 262.

1209. Translation, 2nd edition, 1772: An | Essay | towards a | System | of | Mineralogy: | By | Axel Frederick Cronstedt. | Translated from the Original Swedish, with Notes, | By Gustav von Engeström. | To which is added, a | Treatise on the Pocket-Laboratory, | containing | An Easy Method, used by the Author, for | Trying Mineral Bodies, | written by the translator. | The Whole Revised and Corrected, with some Additional Notes, By Emanuel Mendes da Costa. | [rule] | The Second Edition; | with | An Appendix, containing Additions | and Notes, | By Prof. M.T. Brunnich. | [double rule] | London: | Printed for Edward and Charles Dilly, in the Poultry. | MDCCLXXII.

8°: [4], i-xxxv, [1], [1]-272, [2], 175-188 [...] 289-329, [1], [1]-24 p., 2 folding plates showing blow-pipes. Pages 189 to 288 omitted in the blow-pipe treatise of Engeström. PAGE SIZE: 210 x 130 mm.

CONTENTS: [2 pgs], Half title page, "An Essay towards a System of Mineralogy," verso blank; [2 pgs], Title page, verso blank; i, "Mr. Da Costa's Preface."; ii-iv, "The Translator's Preface."; v-xxi, "The Author's Preface."; [xxii], Blank.; xxiii-xxxv, "The Contents."; [1 pg], "Errata."; [1]-272, Text of Cronstedt treatise.; [1 pg], "Description and Use of a Mineralogical Pocket Laboratory; and especially the Use of the Blow-pipe in Mineralogy. By Gustav von Engeström."; [1 pg], Blank.; 175-188 [...continues...] 289-318, "Description of a Mineralogical Pocket Laboratory, &c."; 319-329, "An Alphabetical Table of Different Minerals, with the Swedish and German Names added thereto, ..."; [1 pg], Blank.; [1]-24, "Appendix to Cronstedt's

Mineralogy; Containing Additions and Notes. By Prof. M.T. Brunnich."; [Contained in the Cronstedt treatise], 2 folding plates, pages 178 and 181.

VERY SCARCE. A reissue of *An Essay towards a System of Mineralogy* (London, 1770), with the addition of an appendix by Mortan Thrane Brunnich.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • LKG: XII 45.

1210. Translation, 3rd edition, 1788: An Essay | Towards A | System of Mineralogy. | By Axel Frederic Cronstedt, | Mine-Master Or Superintendent Of Mines In Sweden. | Translated From The Original Swedish, | With Annotations, And An Additional Treatise On | The Blow-Pipe. | By Gustav Von Engeström, | Counsellor Of The College Of Mines In Sweden. | The Second Edition, | Greatly Enlarged And Improved, By The Addition | Of The Modern Discoveries; And By A New | Arrangement Of The Articles, | By John Hyacinth de Magellan, | [...5 lines of titles and memberships...] | [tapered rule] | In Two Volumes. | [tapered rule] | Vol. I. [-II.] | [tapered rule] | London, | Printed for Charles Dilly, in the Poultry. | M DCC LXXXVIII.

2 vols. [Vol 1] 8°: [a]-c⁸ d⁴ B-Z⁸ 2A-2E⁸; 244ℓ.; [i]-lv, [1], [1]-432 p., one folding plate (mineralogical tool chest); [Vol 2] 8°: π¹ 2F-2Z⁸ 3A-3S⁸ 3T⁴ 3U⁸ 23P⁴; 305ℓ.; [2], 433-1040 p., one folding plate (hydrology blow-pipe). PAGE SIZE: 208 x 120 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii], Dedication to Count Louis De Barbino de Belgioioso by J.H. de Magellan.; [iv], Blank.; v-x, "The | Editor's | Preface."—dated 1788.; xi-xiii, "The | Translator's | Preface."; xiv-xxx, "The | Author's | Preface."; xxxi-xlvi, "The | Contents."; xlix-lv, "Corrections and Additions."; [1 pg], Blank.; [1]-432, Descriptive mineralogy.

[Vol 2] [2 pgs], Title page, verso blank.; 433-872, Descriptive mineralogy—continued.; 873-923, "Appendix."; [924], "Description | Of A | Mineralogical Pocket-Laboratory; | And Especially The | Use Of The | Blow-Pipe | In | Mineralogy. | By Gustav. Von Engstrom."; 925-976, "Description, &c."; 977-999, "Appendix The First. | A Description | Of The | Pocket-Laboratories | For | Assaying Minerals, | By The Editor."; 999-1015, "Appendix II. | Containing various particulars of useful information to Mineralogical Enquires."; [1016], Blank.; 1017-1040, "An | Alphabetical Table | Of The | Contents."

VERY SCARCE. Translated by Gustav von Engeström, with considerable additions and editing by Joao Jacinto de Magalhaens. The book begins with a section on the formation of minerals followed by chapters describing the general divisions of minerals and fossils, the different kinds of earths, salts, inflammables, and metals. An appendix is present, containing an account of composed stones and petrifications; a treatise on the use of the blowpipe; a description of the three pocket laboratories; a method for analyzing earths; a description of an instrument to determine specific gravity; and a new method for making general weights.

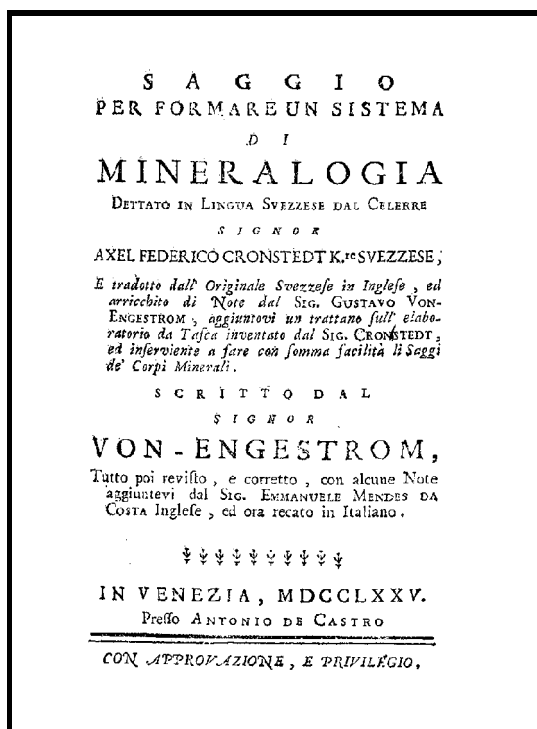
Reprint, 1987: New York, AMS Press, Inc., 1987. 2 vols. [ISBN: 0404184626].

Jean Hyacinth de Magellan [Portuguese: João Jacinto de Magalhães]. (BORN: Aveiro, Portugal, 1723; DIED: London, England, 1790) *Portuguese naturalist & author.* Magellan entered the Catholic College of the Sapiência in Coimbra, where he studied for 11 years. During his classical education he became proficient in Latin, Greek, Spanish, French, German and English as well as the studies of mathematics, chemistry and physics. After graduation, he entered into a religious life. However, his scientific interests caused him to abandon the monastery in 1754 and make a "philosophical trip." He witnessed the devastating Lisbon earthquake of 1 November 1755, before leaving for France in 1756. From there he traveled extensively in throughout Europe meeting the leading scientists of the time. He arrived in London in 1763, and remained.

CRONSTEDT

His chief contribution to science were his mathematical, scientific and geodetic instruments, which are of the highest caliber. He supplied these instruments to the governments of Portugal, Spain, France and Russia. Magellan was a Fellow of the Royal Society of London and elected on Benjamin Franklin's recommendation to the Philadelphia Academy of Science.

REFERENCES: Dana's 7th (Bibliography): 69. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 46. • Hoover Collection: no. 242. • LKG: XII 45. (Magellan [Portuguese: João Jacinto de Magalhães]) BBA: I 731, 21-24. • Carvalho, R. de, "Magalhães, João Jacinto de (1722-1790)," (v. 4, p. 138) in: Serrão, J., *Dicionário de História de Portugal*. Porto, Liv. Figueirinhas, 1981. • Malaquias, I., *A Obra de João Jacinto de Magalhães no Contexto da Ciência do Século XVIII*. Aveiro, 1994. • Malpique, C., "João Jacinto de Magalhães, natural de Aveiro sócio da Academia das Ciências de Paris e da Real Sociedade de Londres," *Sep. Arq. Distrito Aveiro*, 1971, p. 37-49. • Silva, *Dicionário Bibliográfico Português*, 1858-1923: 3, 385-6. • Turner, G.L'E., "The Portuguese agent: J.H. de Magellan," *Antique Horology*, 9 (1974), 74-6. [Describes his role as a supplier of scientific instruments.]. • Vilas-Boas, M., *João Jacinto de Magalhães: um empreendedor científico na Europa do século XVIII*. Aveiro, Fund. João Jacinto de Magalhães, 2000. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



SAGGIO, 1775

Italian editions

1211. — Italian, 1775.

Saggio | Per Formare Un Sistema | Di | Mineralogia | Dettato in Lingua Svezzeſe dal Celerre | Signor | Alex Federico Cronstedt K.º Svezzeſe, | E tradotto dall' Originale Svezzeſe in

Ingleſe, et | arricchito di Note dal Sig. Gustavo Von- | Engestrom, aggiuntovi un trattato ſull' elabo- | ratorio da Taſca inventato dal Sig. Cronstedt, | ed inſerviente a fare con ſomma ſacilità li Saggi | de' Corpi Minerali. | Signor | Von - Engestrom, | Tutto poi reviſto, e corretto, con alcune Note | aggiuntevi dal Sig. Emmanuele Mendes da | Costa Ingleſe, ed ora recato in Italiano. | [ornate rule] | In Venezia, MDCCLXXV. | Preſſo Antonio de Castro | [double rule] | Con Approvazione, E Privilegio.

8º: [i]-lii, [1]-528 p., one plate (blowpipes).

RARE. First Italian edition, with the translation from the 1772 English edition attributed to Angelo Natal Talier.

Angelo Natale Talier. *Italian physician, author & translator*. Nothing is know of Talier's life. He authored a work in color theory, *Dell'arte di Tingere, opera Ricavata dai più Celebri Recentí Autori Ingleſi e Franceſi* (Venezia, 1793).

REFERENCES: BL: [990.d.5.]. (Talier) No references found.

1212. 1779: Saggio per formare un sistema di mineralogia, del kav. A.F. Cronstedt, tradotto dal svezzeſe, ed arricchito di note del sig. G. von Engestrom, al quale vi ſi ha aggiunto un trattato ſull' elaboratorio da taſca ... deſcritto dal ſuddetto dig. von Engestrom. Opera ribeduta e di note illuſtrata, da E. Mendes da Costa. Venezia, P. Seviaioni, 1779.

8º: [i]-lii, [1]-528 p., one plate (blowpipes).

RARE. Perhaps a phantom, this appears to be a reissue of the 1775 Italian edition with a new title page?

Russian editions

1213. Translation, First edition, 1776: Опыт Кронште-това рудословня размноженный Бриннхом, и переве-денный с немецкаго на российский язык Горнаго училища студентом Матвеем Курдлманом. Раз-смотренный учрежденным при оном Училище со-бранием. St. Peterburg, Pech. pri tom zhe Uchilishche, 1776.

8º: [40], 372, [10] p.

VERY SCARCE. Translation by Matveem Kurdyanom from *Versuch einer Mineralogie vermehrt durch Brünlich* (Leipzig, 1770).

REFERENCES: Sopikov, *Essay in Russian Bibliography*, 1904-8: no. 7879. • *Svodnyi Katalog Russkoï Knigi*: no. 3320.

1214. Russian transl., 1789: Опыт рудословной системы г. Кронштета. С некоторыми прибавлениями г. Бринниха. 1776 году переведен с немецкаго на российский язык С. Петербургскаго Горнаго училища студентом Матвеем Курдыманом, а ныне вновь рассмотрен и исправлен. Изд. 2-е. St. Peterburg, Tip. Togo zhe Uchilishcha, 1789.

8º: [4], LXXVIII, 414 [2] p.

VERY SCARCE. Translation by Matveem Kurdyanom from *Versuch einer Mineralogie vermehrt durch Brünlich* (Leipzig, 1770).

REFERENCES: Sopikov, *Essay in Russian Bibliography*, 1904-8: no. 7880. • *Svodnyi Katalog Russkoï Knigi*: no. 3321.

1215. — German, 1781.

Mineralgeschichte über das Westmanländische und Dalekarlische Erzgebirge auf Beobachtungen und Untersuchungen gegründet, nach dessen Handschrift aus dem Schwedischen übersetzt von

J.G. Georgi. Zum Drucke befördert von J.C.D. Schreber. Mit einer Kupferplatte. Nürnberg: in Verlag der Grattenauerischen Buchhandlung, 1781.

8°: 8 A-O⁸ (Plate follows, O⁴); 118ℓ.; [i]-xiv, [1]-216, [8] p., one plate. Includes index. Head and tail pieces.

VERY SCARCE. Translated from an original manuscript by Johann Gottlieb Georgi [see note below] and published at the expense of JOHANN CHRISTIAN DANIEL SCHREBER. The volume describes the mineral wealth of a region in Sweden known as Dalecarils. Contained in this work are extensive discussions of the geological structure of the earth. The folding plate shows various mineral veins.

Johann Gottlieb Georgi. (BORN: Gut Wachholzhausen, Pommern, Germany, 31 December 1729; DIED: St. Petersburg, Russia, 27 October 1802) *German apothecary.* Georgi established an apothecary in Stendal, but moved his establishment in 1770 to St. Petersburg. Using this as a home base he made many explorations in the Russian territory. In 1783, he was elected a member of the Academy of Science in St. Petersburg.

REFERENCES: BL: [953.a.16.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 169-70. • LKG: XIV 803. (Georgi) ADB: 8, 713-4. • Berg, *Russischen Geographischen Entdeckungen*, 1954: 261-3. • *Catalogue of Portraits of Naturalists*: 473 [1 portrait listed]. • DBA: I 380, 385-391; II 439, 160-161. • *Deutsche Apotheker Biographie*: 1, 198-200. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • *Great Soviet Encyclopedia*: portrait. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Moliavko, *Geologi Biograficheskii*, 1985: p. 75. • NDB: 6, 242-3. • Poggendorff: 1, col. 876. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: p. 119. • Walden, P., "Der Apotheker als Kulturträger," *Pharmaz. Zeitung*, 75 (1930), 1323-?. • WBI.

CROOK, Alja Robinson. (BORN: Circleville, Ohio, U.S.A., 17 June 1864; DIED: Springfield, Illinois, U.S.A., 1930) *American mineralogist.*

Crook graduated from Ohio Wesleyan University. He then traveled and studied extensively in Europe earning in 1892 a doctorate in geology from the University of Munich. He then spent 14 years as a professor of mineralogy at Northwestern University, before being appointed curator in 1906 of the Illinois State Museum. During the next 24 years Crook was responsible for successfully expanding its collections.

REFERENCES: ABA: I 375, 190-193. • *Bulletin of the Geological Society of America*: 42 (1931), 19-25. • *Herringshaw's National Library of American Biography*. • WBI. • *Who Was Who in America*: 1, ??.

1216. — English, 1920 [Collection catalog].

Guide To The | Mineral Collections | In The | Illinois State Museum | By | A.R. Crook, Ph.D., | [...2 lines of titles and memberships...] | [rule] | Springfield, Illinois | 1920.

8°: [i]-xxi, [1], [1]-294 p., 31 plates (partly colored), 236 illus. PAGE SIZE: 222 x 148 mm.

CONTENTS: [i-ii], Half title page, "Guide To The Mineral Collections In The | Illinois State Museum," verso blank.; [iii], "State Of Illinois."; [iv], Blank.; v, "Letter Of Transmittal."; [vi], Blank.; [vii-viii], Title page, verso "Published October 1920."; ix, "Preface."; [x], Blank.; xi, "Table Of Contents."; [xii], Blank.; xiii-xx, "List Of Illustrations."; xxi, "Abbreviations."; [1 pg], Blank.; [1]-4, "Introduction."; 5-193, Text.; 194-195, "Summary."; 196, "Names Of Minerals."; 197, "The Uses Of Minerals.";

198-200, "History Of The Study Of Minerals."; 201-275, "Comprehensive List Of Minerals."; [277], Sectional title page, "General Index."; [278], Blank.; 279-294, Text of index.

SCARCE. The Illinois State Museum of Springfield, Illinois was created by act of the state Legislature in 1877. It accumulated a menagerie of objects including a large mineral collection. This *Guide* is a fine work that is more than a catalog, being in fact a well written and popular textbook of mineralogy. The text has chapters on nomenclature, the uses of minerals, history of mineralogy, chemistry, etc., which is richly illustrated with text figures and 31 photographic plates showing specimens from the museum.

REFERENCES: NUC.

CROSBY, William Otis. (BORN: Decatur, Ohio, 14 January 1850; DIED: Boston, Massachusetts, 31 December 1925) *American geologist.*

Crosby was from 1883 assistant professor of mineralogy and lithology at the Massachusetts Institute of Technology. He was involved in mining activities in North Carolina and Colorado.

REFERENCES: ABA: I 376, 302-308. • Adams, *Dictionary of American Authors*, 1904. • *Appleton Cyclopædia of American Biography*. • *Bulletin of the Geological Society of America*: 38 (1927), p. 34-45, portrait. • DAB. • *Herringshaw's National Library of American Biography*. • Poggendorff: 3, p. 314 & 4, p. 282-283. • WBI. • *Who Was Who in America*.

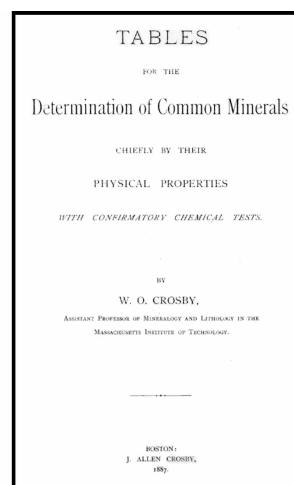
1217. — English, 1881 [First edition].

Common Minerals and Rocks. Boston Society Natural History, Guides for Science Teaching, No. XII. Boston, Heath & Co., 1881.

16°: 205, [4] p., 40 illus.

VERY SCARCE. An elementary teaching guide to be used by the youngsters interested in learning about minerals and rocks. A list of mineral and rock specimens for sale by the author appears at the end of the text.

REFERENCES: NUC. • *USGS Library Catalog*.



TABLES, 1887

CRYSTALLOGRAPHIC SOCIETY

1218. — English, 1887 [First edition].

Tables | For The | Determination | of Common Minerals | Chiefly By Their | Physical Properties | With Confirmatory Chemical Tests. | By | W.O. Crosby, | [...2 lines of titles and memberships...] | [ornate rule] | Boston: | J. Allen Crosby, | 1887.

8°: [2], [1]-74 p., tables.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1887, | By W.O. Crosby."; [1]-2, "Preface."—dated 1 November 1886.; [3]-24, Text.; [25], "General Classification."; 26-71, Tables.; [72], "How To Use The Tables."; [73]-74, "Index" (lists the names of the mineral species).

VERY SCARCE. An introductory laboratory manual with an initial text and a series of tables listing the physical properties for determining the more common minerals. Discussions include the crystallography of the systems, internal and external structure, and descriptions of the physical properties and their chemistry, especially with respect to their action before the blowpipe and chemical analysis. Information about the apparatus and reagents used in testing the common minerals is also presented. The *Tables* were apparently popular with many issues and the final edition of the text appearing in 1922.

REFERENCES: NUC. • *USGS Library Catalog*.

1219. 2nd edition, 1894: Tables for the determination of Common Minerals, Chiefly By Their Physical Properties with Confirmatory Chemical Tests by W.O. Crosby ... Boston, 1894.

8°: 84 p. VERY SCARCE.

REFERENCES: NUC. • *USGS Library Catalog*.

1220. 3rd edition, 1895: Tables | For The | Determination of Common Minerals | Chiefly By Their | Physical Properties | With Confirmatory Chemical Tests | By | W.O. Crosby | [...2 lines of titles and memberships...] | [rule] | Third Edition | Rewritten And Enlarged | Boston | Published By The Author | 1895.

8°: [2], [1]-106, [2] p., tables. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1895, | By W.O. Crosby."; [1]-2, "Preface."; [3]-24, "Introduction."; [25], "General Classification."; 26-97, Tables.; 98-101, "Synopsis Of The Classification Of Minerals."; [102], "Synopsis of the Classification of Minerals by the Basic Element."; [103]-106, "Index."; [2 pgs], Advertisements.

REFERENCES: NUC. • *USGS Library Catalog*.

CROSS, Roselle Theodore. (BORN: Richville, New York, U.S.A., 21 August 1844; DIED: Denver, Colorado, USA, 1924) *American theologian & mineralogist*.

Cross graduated from Oberlin College in 1867, and studied theology at Union Theological Seminary and Andover. Oberlin and York Colleges both awarded him the Doctor of Divinity degree. He assumed the pastorate of a church in Hamilton, New York where he served from 1874-1876. In 1876, Cross came to Colorado at the request of the Home Mission Board to discover the reasons for the short pastorates of young men who came to the west. He became the first pastor of the Congregational church in Colorado Springs who was not directly involved with Colorado College. He served in that position for five years. He founded the short-lived *The Congregational News* in 1879. After Colorado Springs, he became pastor of the Congregational church in West Denver, followed by Minneapolis, York, Nebraska, Eugene, Oregon before returning to Denver. While pastoring in Colorado Springs he organized a group of boys into an exploring association.

The group is credited with the discovery of the "Cave of the Winds" in 1880.

REFERENCES: Hafen, L.R., *Colorado and its People*. New York, 1948. • Pearl, R.M., *Colorado Gem Trails and Mineral Guide*. Third edition, revised. Chicago, 1972: p. 22.

1221. — English, 1887.

Clear as Crystal. | [rule] | A Series Of Talks To Children On The Crystal, Given | In The West Denver Congregational Church In | Denver, Colorado, During 1886 And 1887. | [rule] | By Rev. R.T. Cross, | Author of Home Duties. | [rule] | Fleming H. Revell. | [to left, 2 lines:] Chicago: | 148 And 150 Madison Street, | [in center, 2 rules] | [to right, 2 lines:] New York: 148 And 150 Nassau Street. | Publisher of Evangelical Literature.

8°: [i]-iii (i.e., viii), 9-206, [2] p.

VERY SCARCE. The text consists of 49 chapters that describe various crystals and their properties as an entree to speak of God to children. It is based on talks and sermons given in The West Denver Congregational Church in 1886-'87 and includes anecdotes of the authors mineral collecting experiences in the West. The last page contains Rev. Cross' advertisement to sell at reasonable prices a collection of "clear, smokey, opaque..." quartz crystals from the Rocky Mountains and elsewhere.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 1501.

1222. — English, 1903.

Crystals and Gold | [rule] | By | R. T. Cross | Author of Home Duties, | Clear as Crystal, etc. | [rule] | Copyright 1903 by Roselle Theodore Cross. | [rule] | The Nebraska Newspaper Union, | Printers and Binders, York, Nebraska.

8°: [1]-192 p., frontispiece (portrait of Cross).

VERY SCARCE. The text, written in 18 chapters, provides an early account of mineral collecting in St. Lawrence County, New York, the Black Hills of South Dakota and the mountains of Colorado.

REFERENCES: Pearl, R.M., *Colorado Gem Trails and Mineral Guide*. Third edition, revised. Chicago, 1972: p. 22. • Sinkankas, *Gemology Bibliography*, 1993: no. 1502.

CRYSTALLOGICAL SOCIETY.

1223. — English, 1877-82 [Periodical].

Proceedings | Of The | Crystallogical Society. | [rule] | Parts I. and II. | [rule] | London: | Printed by Taylor & Francis, Red Lion Court, Fleet Street. | [short rule] | 1877, 1882.

2 parts. 8°: [4], 131 p., 8 plates (partly folding), illus.

RARE. All published. The Crystallographical Society was the forerunner of the more famous Mineralogical Society of Great Britain and Ireland, with which it was amalgamated on 11 December 1883. Its purpose was to promote and encourage the study of

the sciences of crystallography and mineralogy. These Proceedings were apparently the only publication while the Crystallographical Society stood alone.

REFERENCES: BL: [6688.200000]. • Bolton, *Catalogue of Periodicals*, 1897: ?? • *Union List of Serials*: ??.

CSIBA, István. (BORN: Kecskemét, Hungary, 29 October 1673; DIED: Kassa, Hungary, 29 September 1719) *Hungarian clergyman*.

Csiba was a Jesuit who wrote many works on a large variety of subjects.

REFERENCES: LKG: p. 284. • *Magyar Életrajzi Lexikon*. • Papp, *Magyar Topografikus*, 2002: p. 395. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

1224. — Latin, 1714 [Dissertation].

Dissertatio historico-physica montibus Hungariae. R. P. Stephano Csiba. Tyrnaviae (Tyrnau), Typis Acad. Roden, 1714.

8°: 140 p.

VERY RARE. Dissertation, Tyrnau University, 1714. A scholastic dissertation that provides a natural history description of the mountainous regions of Hungary, including its mineral wealth, mines, minerals, geology, etc.

Treatise about the mountains and the fauna of Hungary, with a description of regions where wines are produced. Contemporary hardpaper binding, minor damage to the spine. Poss.: Horvßt Istvßn és Lehr Albert gyűjteményi bélyegzőjével.

REFERENCES: LKG: XIV 836 & 837. • Papp, *Magyar Topografikus*, 2002: p. 46-7 & 395.

CÜCHLER, Elias.

1225. — Latin, 1658 [Dissertation].

Q.D.B.V. ... Dissertationem physicam De terra lemnia disquisitioni publicæ exponunt præses m. Samuel Hentschel ... & respondens m. Elias Cüchlerus. Wittebergæ, Literis Johannis Haken [1658].

4°: A-B⁴; 8ℓ.

RARE. Diss.—Wittenberg (S. Hentschel, præses).

REFERENCES: Hoover Collection: no. 243.

CULMANNUS, Laurentius.

1226. — Latin, 1626 [Dissertation].

Disputatio Physica | De Corporibus Metall-
cis, Seu Mineralibus, | Quaus | Auspice Dio Opt
Man. | In Academia Holfato-Schaumburgica |
Sub Præsidio | Clarissimi ac Excellentissimi viri
Domini | M. Henrici | Henechii, | Phys. ac
Orator. Profess. publ. | Præceptorisac Fautoris
sui ævi- | rernum colendi, | Pro impetrandis
Magisterii Privilegiis, omnibus | veritatis am
atoribus publicè difcutiendam projsnit | in Aud.
Majori | Laurentius Culmannus, | Münderâ-
Brunswigius. | Die 16.Jun. [...UNREADABLE...] |
[ornament] | Rintelij ad Visurgim, | Typis exseripsit

Petrus Lucius Typogr. Academius | [rule] | M. DC.
XXVI.

4°: A-C⁴; 12ℓ.

VERY RARE. Dissertation præsidied over by Henrici Henechius and presented 16 June 1626 describing the origin and nature of the native metals. Frequent reference is made to the older authorities including Aristotle, Pliny and Agricola.

REFERENCES: BL: [1255.a.5].

CUMENGE, Edouard. (BORN: 1828; DIED: 1902)
French mining expert.

Cumenge was assigned as engineer to the École des Mines in 1851, but was dismissed the following year. For the remainder of his life, he worked as a consultant in numerous countries including Spain, Italy, Greece, Venezuela, Colombia, The United States, Mexico, and Transylvania. At a copper deposit near Boleo in Baja, Mexico, Cumenge recovered two new mineral species, which were named by Mallard, boleite and cumengeite.

REFERENCES: Wilson, W.E., "Edouard Cumenge (1828-1902): Engineer Mineralogist Responsible for Initial Discoveries of Lead and Copper Chlorides in Boleo, Baja California, Mexico," *Mineralogical Record*, **29** (Jan.-Feb., 1998), 23-5.

1227. — French, 1898.

L'Or | Dans La Nature | [Next 3 lines in red:]
| Mineralogie, Geologie, | Étude Des Principaux
Gites Auriferes | Statistique | Par | [The authors
set in two columns seperated by a vertical rue:] E.
Cumenge | Ingénieur en chef honoraire des Mines
| [vertical rule] | F. Robellaz | Ingénieur civil des
Mines | [short rule] | Premier Fascicule | [short rule]
| Paris | P. Vicq-Dunod Et C^{ie}, Éditeurs | Libraires
des Corps Nationaux des Ponts et Chaussées, des
Mines et des Télégraphes | 49, Quai Des Grands-
Augustins, 49 | [short rule] | 1898 | Droits de
traduction et de reproduction réservés.

8°: π¹ 1-7⁸; 57ℓ.; [2], [1]-106, [2], [i]-iv p.,
13 photographic plates (showing various specimens of
gold).

CONTENTS: [2 pgs], Title page, verso blank.; [1]-4,
"Préface."—signed E. Cumenge & F. Robellaz.; [5]-63,
Text, part 1.; 64-74, Text part 2.; 75-106, Text, part 3.;
[1 pg], "Sommaire Du Prochain Fascicule."; [1 pg], Blank;
[i]-iv, "Table Des Matières."

SCARCE. Co-authored with Fernand Robellaz. This is the premier fascicule of which no more were published of what was to be an authoritative work on metals. The text describes gold and its associated minerals. The first portion covers native gold and provides information on the physical properties, crystallography, and chemical and thermal properties. Specimens of native gold are described and illustrated on the plates as are mineral species and rock types that are associated with native metal. The second part describes mineral species that contain gold, such as electum, amalgam, calaverite, petzite, sylvanite, etc. A third section provides an historical introduction to gold and its history in Africa, Asia and Europe. Modern uses and discoveries are then described and include

CUVIER

America and Australia. The series of 13 excellent plates represent natural specimens of exceptional beauty of crystallization.

REFERENCES: *American Journal of Science*: 4th Series, **6** (1898), 276 [review]. • NUC: **129**, 278 [NC 0831011].



CUPANI

CUPANI, Francesco. (BORN: Mirto, Messina, Sicily, 21 January 1657; DIED: Mirto, Messina, Sicily, 19 January 1710/11) *Italian botanist.*

Cupani studied medicine and became a Franciscan. He dedicated himself to the study of natural history, and most especially botany. In particular he studied the Sicilian flora and was the friend and student of SILVIO BOCCONE, who was a pioneer naturalist in Sicily. Due to a huge correspondence among his contemporaries, Cupani became very famous throughout all of Europe. He founded a botanical garden 'Garden of Misilmeri' in 1692 where native and exotic plants were cultivated.

REFERENCES: *Catalogue of Portraits of Naturalists*: 329 [1 portrait listed].

1228. — Latin, 1713.

Panphyton siculum; sive, *Historia naturalis de animalibus, stirpibus et fossilibus, quae in Sicilia vel in circuitu ejus inveniuntur. Opus posthumum ad motum Fr. Cupani imaginibus aeneis circiter septingentis e vero tractis. Panormi, Ex typographia regia Antonini Epiro, 1713.*

2°: 84l., showing 168 plates numbered 1-168. Title pages appear only as a manuscript leaf. There may be other text leaves that are not always present.

VERY RARE. Although principally a botanical work this posthumous publication is a generously illustrated natural history of the author's native Sicily. It illustrates the plants, animals, and minerals of that island. There is little or no text as the work was still in preparation when Cupani died. Never the less, the *Panphyton Siculum* contains the first descriptions of several plant species new to science.

Facsimile reprint, 2003: *Panphyton siculum*. Edizione a cura di Carlo Pastena, Angela Anselmo, Maria Carmela Zimmardi. Palermo, Regione siciliana, Assessorato dei beni culturali ed ambientali e della pubblica istruzione, Dipartimento dei beni culturali ed ambientali e dell'educazione permanente, Biblioteca centrale della Regione siciliana, 2003. 3 vols., illus.

REFERENCES: BL: [447.i.11.]. • BMC: **1**, 406. • Nissen (BBI): no. 443. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 1995. • *Proceedings of the Linnean Society of London*: Nov. 1917-June 1918, p. 8. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: ??.



CUVIER

CUVIER, George. (BORN: Montbéliard, France, 23 August 1769; DIED: Paris, France, 13 May 1832) *French naturalist.*

Baron Georges Leopold Chretien Frédéric Dagobert Cuvier, French naturalist, was born at Montbéliard, and was the son of a retired officer on half-pay belonging to a Protestant family which had emigrated from the Jura mountains on the French-Swiss border as a consequence of religious persecution.

He early showed a bent towards the investigation of natural phenomena, and was noted for his studious habits and marvellous memory. After spending four years at the Academy of Stuttgart, he accepted the position of tutor in the family of the Comte d'Héricy, who was in the habit of spending the summer near Fécamp. It thus came about that he made the acquaintance of the agriculturist, AH Tessier, who was then living at Fécamp, and who wrote strongly in favour of his protégé to his friends in Paris – with the result that Cuvier, after corresponding with the well-known naturalist E. Geoffroy Saint-Hilaire, was appointed in 1795 assistant to the professor of comparative anatomy at the Museum d'Histoire Naturelle.

REFERENCES: Callisen, *Medicinisches Schriftsteller-Lexicon*, 1830-45: **4**, 462-80 & **27**, 195-202. • *Catalogue of Portraits of Naturalists*: 332 [15 portraits listed]. • DBF: **9**, 1438-42. • DSB: **3**, 521-8. • Fruton, *Bio-Bibliography*, 1982: 149 [other refs.]. • Mayerhöfer, *Lexikon der Naturwissenschaften*, 1958-75: **1**, 697-9. • Poggendorff: **1**, col. 507. • *World Who's Who in Science*: 399.

1229. — French, 1798.

Notice sur un Squellette d'une tres - grande espece de quadrupede inconnue jusqu'apresent, trouvee an Paraguay et deposee au Cabinet d'Histoire naturelle de Madrid. Paris, 1798.

8°: VERY SCARCE.

REFERENCES: LKG: XVII 100.

1230. — French, 1800.

Extrait d'un ouvrage sur les especes des Quadrupedes, dont on a trouve les ossemens dand l'interieur de la Terre; adr. aux savans et aux amateurs des sciences. Paris, 1800.

8°: VERY SCARCE.

REFERENCES: LKG: XVII 100a.

1231. — French, 1810.

Rapport Historique | Sur Les Progrès | Des Sciences Naturelles | Depuis 1789, | Et Sur Leur État Actuel, | Présenté à Sa Majesté l'Empereur et Roi, en son Conseil d'état, | le 6 Février 1808, par la Classe es Sciences physiques et mathématiques de l'Institut, conformément à l'arrêté du Gouvernement du | 13 Ventôse an x; | Rédigé par M. Cuvier, Secrétaire perpétuel de la Classe | pour les Sciences physiques. | [rule] | Imprimé Par Ordre de Sa Majesté. | [ornament] | A Paris, | De L'Imprimerie Impériale. | [wavy rule] | M.DCCC.X.
4°: π^3 b4 A-Oo⁴ Pp²; 158ℓ.; [iii]-xvj, [1]-298, [2] p.

PAGE SIZE: 229 x 152 mm.

CONTENTS: [iii-iv], Half title page, "Rapport Historique | Sur Les Progrès | Des Sciences Naturelles," verso blank.; [v-vi], Title page, verso blank.; [viii]-viii, "Avertissement."; [ix]-xvj, "Table | Des Articles qui composent de Rapport." (=table of contents); [1]-298, Text.; [1 pg], "Réponse De Sa Majesté."; [1 pg], Blank.

SCARCE. The first sections discuss the works of Romé de l'Isle, Haüy and Berthollet. Other portions describe chemistry, hydrology, geology, mineralogy, medicine, surgery, veterinary, etc.

In his capacity, again, of perpetual secretary of the Institute, he not only prepared a number of éloges historiques on deceased members of the Academy of Sciences, but he was the author of a number of reports on the history of the physical and natural sciences, the most important of these being the Rapport historique sur le progrès des sciences physiques depuis 1789, published in 1810.

There was a corresponding report by Delambre, Rapport historique sur les progrès des sciences naturelles, 1810; and one by Dacier, Rapport sur les progrès de l'histoire et de la littérature anciennes présenté par la Classe d'histoire et littérature ancienne, 1810.

REFERENCES: *Freilich Sale Catalog*: no. 142. • LKG: I 24. • *Wheeler Catalogue*: no. 702.

1232. — French, 1812 [Collected works].

Recherches | Sur | Les Ossemens Fossiles | De Quadrupèdes, | Ou L'On Rétablit | Les

Caractères De Plusieurs Espèces D'Animaux | Que Les Révolutions Du Globe Paroissent Avoir Détruites; | Par M. Cuvier, | [...12 lines of titles and memberships...] | Tome Premier, | Contenant Le Discours Préliminaire Et La Géographie Minéralogique | Des Environs De Paris. | [tapered rule] | A Paris, | Chez Deterville, Libraire, rue Hautefeuille, N° 8. | 1812.

4 vols. [VOL 1] 4°: [6], [i]-vj, [1]-120, [1]-20, 3 plates (=birds), [i]-viii, [1]-278, [1]-23, [1] p., 2 plates, one large folding hand-colored map. [VOL 2] 4°: [VOL 3] 4°: [VOL 4] 4°:

CONTENTS: [Vol 1] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [1 pg], "Table Des Articles" (=table of contents); [1 pg], Dedication, signed Cuvier 31 October 1812.; [i]-vj, "Avertissement."; [1]-116, "... Discours Préliminaire."; [117]-120, "Extrait."; [1]-20, "Mémoire | Sur l'Ibis des anciens Egyptiens."; [3 plates (=birds)]; [i]-iv, "Avertissement."; [v]-viii, "Table Des Articles." (=table of contents); [1]-278, "Essai | Sur | La Géographie Minéralogique | Des | Environs De Paris, | Par MM. G. Cuvier et Alex. Brongniart."; [1]-23, "Additions Et Corrections."; [1 pg], Blank.; [At end], 2 plates and one large folding geological map.

[Vol 2]
[Vol 3]
[Vol 4]

VERY SCARCE. This lavishly illustrated and brilliantly written work collects together Cuvier's many separate publications on fossil remains, essentially founding the science of modern paleontology, and greatly advancing the development of comparative anatomy. His presentation of evidence of progressive development he destroyed the view of immutability of speices and contributed to the Darwinian theory of evolution. The *Discours Préliminaire* published in volume one (later published as the much discussed *Discours sur les Révolutions du Globe*) contains the author's famous theory of the remote history of the earth. "In the whole literature of comparative anatomy and paleontology there is scarcely any work that can rank with this great masterpiece" (*Zittel*).

Contents t. 1. Le discours préliminaire. La géographie minéralogique des environs de Paris. – t. 2. Les pachydermes des couches meubles et des terrains d'allurion. – t. 3. Les os fossiles des environs de Paris. – t. 4. Les ruminans, les onguiculés et les reptiles fossiles.

Facsimile reprint, 1969: *Recherches sur les ossemens fossiles de quadrupèdes, ou l'on rétablit les caractères de plusieurs espèces d'animaux que les révolutions du globe paroissent avoir détruites*. Paris, Deterville, 1812. [Bruxelles, Culture et civilisation, 1969]. 4 vols.

REFERENCES: Adams, *Birth and Development*, 1938: pp. 265-6. • *Freilich Sale Catalog*: no. 143 [second edition, 1821-4]. • *Horblit*: no. 20b. • LKG: XVII 101b. • Nissen (ZBI): no. 1011. • Nissen (ZBI): no. 1011. • Nordenskiöld, *History of Biology*, 1935: pp. 337-9. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 307. • *Zittel, History of Geology*, 1901: pp. 135-7 [gives a full account].

Essai sur la Géographie Minéralogique**1233. — French, 1810.**

Essai sur la géographie minéralogique des environs

D'ACHIARDI

de Paris et tableaux des hauteurs mesurés aux environs de Paris et qui ont servi à dresser les diverses coupes et profils de ce Canton, in: *Mémoires de la Classe des Sciences Mathématiques et Physiques de l'Institut Imp. de France*, 1810.

4°: 347 p., one hand colored engraved map (size: 75 x 65 cm), 2 engraved folding maps.

VERY SCARCE. The first important geological map of the region around Paris, including 11 colors. Geikie (1905) devotes an entire chapter to the importance of this publication.

REFERENCES: LKG: XIV 355.

1234. — French, 1811.

Essai sur la Géographie Minéralogique des Environs de Paris, avec une Carte Géognostique, et des Coupes de Terrain. Paris, Baudouin, 1811.

4°: [4], viii, 278 p., 2 folding engraved plates (one hand-colored), one hand-colored folding map of the geology of the basin of Paris. PAGE SIZE: 250 x 195 mm.

RARE. Co-authored with ALEXANDRE BRONIGNART. First published in 1808 in *Annales du Musée d'Histoire Naturelle, Paris*, volume II. This is the work's first appearance in book form, which has been enlarged through the subsequent investigations of both authors. "These two great men not merely marked out the grouping of the formations in a limited tract of country. They established on a basis of accurate observation the principles of palaeontological stratigraphy. They demonstrated the use of fossils for the determination of geological chronology, and they paved the way for the enormous advances which have since been made in this department of science. For these distinguished labours they deserve an honoured place among the founders of geology" (Geikie). Contained in this work is the first really important geological map on the Paris region incl. 11 colours.

REFERENCES: Geikie, *Founders of Geology*, 1905: p. 372. • LKG: XIV 355. • Ward & Carozzi, *Geology Emerging*, 1984: no. 564.

1235. 2nd edition, 1822: Description Géologique des environs de Paris. Nouvelle édition dans laquelle on a inséré la descriptions d'un grand nombre de lieux de l'Allemagne, de la Suisse, de l'Italie etc., qui présentent des terrains analogues à ceux du Bassin de Paris. Par M. Alex. Brongniart. Paris, G. Dufour et E. d'Ocagne, 1822.

4°: [4], viii, 428 p., 2 folding engraved maps (one brightly hand-colored geological map of the basin of Paris), 16 lithographed plates (one of which is the hand-colored geological map of the basin of London).

RARE. This edition includes an alphabetical index to all the geological sites around Paris. It is the first French work to adopt the method introduced by William Smith [1769-1839] of determining the respective ages of the rocks by means of the fossils contained in them. Seven plates show fossil shells.

REFERENCES: BL.

D***.

1236. — French, 1775 [Sale catalog].

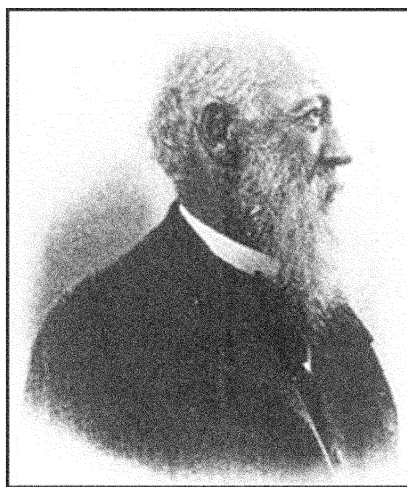
Catalogue d'une Collection de très-belles Coquilles,

Madrépores, Stalactiques, Litophytes, Pétrifications, Mines, Plaques & Cailloux agathisés & cristallisés, Plaques d'Agathes, Pierres fines non montées, Agathes arborisées, Marbres, Bois pétrifiés, agathisés & autres Animaux; Bijoux, Bronzes Indiens & Egyptiens, Médailles & Monnoies d'Or, d'Argent & de Bronze, composant le Cabinet de M. D***. Rouen, la Veuve Besongne & fils, 1775.

8°: 55 p.

RARE. Catalog of a cabinet, rich in shells, corals, minerals and fossils. It was sold *en bloc* and was contained in seven armoires. Items are listed shelf by shelf.

REFERENCES: NUC: [no copy listed].



ACHIARDI

D'ACHIARDI, Antonio. (BORN: Pisa, Italy, 28 November 1839; DIED: Pisa, Italy, 10 December 1902) *Italian mineralogist.*

Father of the Italian mineralogist Giovanni [1872-1944], d'Achiardi began his studies at Pisa in 1859, receiving his degree for doctor of science from Pisa in 1859. He subsequently became assistant for chemistry in 1861, and in 1870, for mineralogy. He was appointed professor extraordinary of mineralogy in 1874 and professor ordinary in 1876.

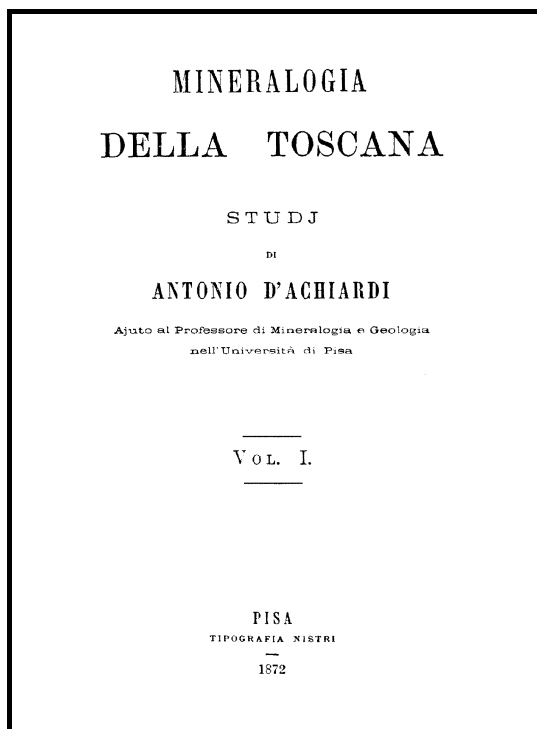
REFERENCES: ABI: I 5, 260-263. • *American Journal of Science*: 4th Series, **165** (1903), 242. • Barr, *Index to Biographical Fragments*, 1973: 1. • *Bollettino della Società Geologica Italiana Roma*: **22** (1903), 111-23. • Bonati, S., "Antonio d'Achiardi," *Rc. Soc. Mineral., Italia*, **21** (1965), 12 p. • Canavari, M., "Necrologie. Antonio d'Achiardi," *Annuario della R. Università di Pisa*, 1903-4, 473-83. • *Dizionario Biografico Italiani*: **31**, 572-4. • Poggendorff: **3**, 8 & **4**, 6. • Sarjeant, *Geologists*, 1980: **2**, 798-9. • *Science*: **17** (1903), 119. • WBI. • *Zentralblatt für Mineralogie*: Jg. 1904, 55-6.

1237. — Italian, 1872.

Studi sui minerali della Toscana. Pisa, 1872.

4°: 30 p.

VERY SCARCE. First separate issue. Not in NUC. Extracted from *Ann. Univ. Toscan.*, **10**.



MINERALOGIA DELLA TOSCANA, 1872

REFERENCES: BMC: 1, 8.

1238. — Italian, 1872-3.

Mineralogia | Della Toscana | Studj | di | Antonio D'Achiardi | Ajuto al Professore di Mineralogia e Geologia | nell'Università di Pisa | [rule] | Vol. I. [-II.] | [rule] | Pisa | Tipografia Nistri | [rule] | 1872 [-1873].

2 vols. [VOL 1] 8°: [2], [1]-276 p.; [VOL 2] 8°: [2], [1]-402, [2] p. PAGE SIZE: 225 x 150 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [1]-15, "Prefazione."; [16], Blank.; [17]-263, Text of descriptive mineralogy.; [264], Blank.; [265]-272, "Appendice."; [273]-275, "Indice."; 276, Errata.

[Vol 2] [2 pgs], Title page, verso blank.; [1]-360, Text, continuation of descriptive mineralogy.; [361]-366, "Appendice. Aggiunte al 1.o Volume."; [367]-388, "Indice delle principali giaciture di minerali della Toscana e delle specie proprie a ciascuna di esse."; [389]-390, "Indice delle principali cave e miniere."; [391]-398, "Indice Alfabetico dei minerali Descritti"—index to the mineral names contained in both volumes.; [399]-402, "Indice."; [1 pg], "Errata-Corrige."; [1 pg], "Avvertenza."

VERY SCARCE. This splendid and unsurpassed topographical mineralogy describes the rich geological region of Tuscany in Italy. Each species known to occur within the area is provided a full description, including known occurrences, mineralogical associations, and occasional notes on the history of that species in Tuscany. The text principally treats these descriptions, while the three indexes at the end reference the localities where species are found, the principal mines and caves

of the region, and a list of all mineral species mentioned.

Facsimile reprint, c1980: Antonio D'Achiardi | Mineralogia | Della | Toscana | I [-II] | Arnaldo Forni Editore. 2 vols. Reprints the original volumes with a new title page.

REFERENCES: BMC: 1, 8. • Dana's 7th (Bibliography): 69. • NUC: 2, 664.

1239. — Italian, 1875.

Bibliografia mineralogica, geologica e paleontologica della Toscana. Per A. d'Achiardi. Roma, Tipografia Barbra, 1875.

8°: [2], 57, [1] p.

VERY SCARCE. Topographical – Italy – Tuscany – bibliography.

Related work: *Histoire des Progrès de la Géologie de 1834 à 1845*. Paris, Société géologique de France, 1847-1860. 8 vols.

Rare. This work describing the progress of geology from 1834 to 1845 can today still be consulted with profit for the geological historian. Originally it was to consist of four volumes, but D'Archiardi finally gave up writing at volume eight. The work is divided into the following volumes. 1. Cosmogony and géogénie, physique of the earth. 2. Le part.Terrain quaternary or torrential. 2. 2nd share. Tertiary ground. 3. Nummulitic formation. Rocks igneous or pyrogenic of the quaternary and tertiary times. 4. and 5. Cretaceous formation. 6. and 7. Jurassic formation. 8. Triassic formation. Illustrated by 4 plates. These volumes are a remarkable collection of learning that is still highly appreciated by geologists.

REFERENCES: BMC: 1, 8. • NUC: 2, 664. • USGS Library Catalog.

1240. — Italian, 1883.

I metalli loro minerali e miniere di Antonio d'Achiardi ... Milano, U. Hoepli, 1883.

2 vols.

VERY SCARCE. Metallography.

REFERENCES: BMC: 1, 8. • Dana's 7th (Bibliography): 69. • NUC: 2, 664.

1241. — Italian, 1900.

Guida al corso di mineralogia, di Antonio d'Achiardi ... Mineralogia generale. Pisa, E. Spoerri, 1900.

8°: [2], [iv], 339 p., text illus.

VERY SCARCE. Contents: I. Morfologia. II. Fisica mineralogica. III. Chimica mineralogica. IV. Glacimenti. V. Classificazione.

1242. — Italian, 1915.

Antonio d'Achiardi ... Guida al corso di mineralogia; Mineralogia generale (con 576 figure nel testo). 2. ed. riordinata ed ampliata, da Giovanni d'Achiardi ... Pisa, E. Spoerri, 1915.

8°: [2], [iv], 339 p., text illus.

VERY SCARCE. Edited by Giovanni d'Achiardi from the 1900 edition.

REFERENCES: BMC: 6, 3. • NUC: 2, 664.

1243. — Italian, 1903.

[Contained within a double ruled border:] Lavori Eseguiti Nell'Istituto di Mineralogia | Dell'Università di Pisa Nel 1903 | [rule] | Alla Memoria | di |

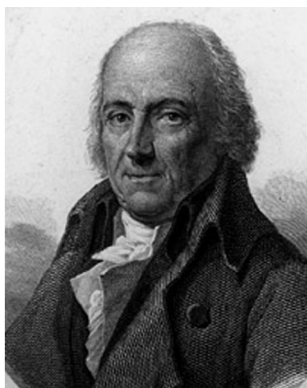
D'ARCET

Antonio D'Achiardi | Professore di Mineralogia
Nell'Università di Pisa | [rule] | Pisa | Tipografia
Successori Fratelli Nistri | [rule] | 1903.

8°: 29 p., one portrait.

VERY SCARCE. Memorial to Antonio D'Achiardi,
including a portrait.

REFERENCES: BMC: 6, 3.



D'ARCET

D'ARCET, Jean. (BORN: St. Sèver, Département
Landes, France, 7 September 1725; DIED: Paris, France,
13 February 1801) *French physician & chemist.*

D'Arcet (or Darcet) was a Liège surgeon who became
intested in science, especially chemistry. He was appointed
professor of chemistry at the Collège de France, and became
inspector of the Gobelins' dye works. Eventually he
succeeded P.J. Macquer and became director of the Sèvres
porcelain works.

REFERENCES: *Biographie Universelle*: 10, 129. • DSB:
3, 560-1. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 40. •
Poggendorff: 1, col. 521. • *World Who's Who in Science*: 408.

1244. — French, 1766.

Memoire | Sur L'Action | D'Un Feu Egal, Violent,
| Et continué pendant plusieurs jours sur un |
grand nombre de Terres, de Pierres & de | Chaux
Métalliques essayées pour la plu- | part telles
qu'elles sortent du sein de la | Terre. | Lu à
l'Académie Royale des Sciences les 16 & 28 | Mai
1766. | Par M. D'Arcet, Docteur Régent de la |
Faculté de Médecine de Paris. | [ornament] | A Paris,
| Chez P.G. Cavelier, Libraire, rue | Saint Jacques,
au Lys d'or. | [double rule] | M. DCC. LXVI. | Avec
Approbation & permission.

8°: A-G⁸ H⁵; 61ℓ.; [1]-122 p.

CONTENTS: [1]-2], Title page, verso blank.; [3]-[4],
"Avertissement."; [5]-107, Text.; 108-122, "Extrait des
Registres de l'Académie Royale des Sciences. Du 14. Juin
1766."

RARE. Under the patronage of the Comté de
Lauraguais, a pupil of the elder Rouelle and a pioneer in
the French efforts to duplicate the porcelain of Meissen,
D'Arcet had been exploring the effects of high heat
on a wide variety of mineral substances. Continuing
and expanding the work of J.H. POTT [which see], the

MEMOIRE

SUR L'ACTION

D'UN FEU EGAL, VIOLENT,

*Et continué pendant plusieurs jours sur un
grand nombre de Terres, de Pierres & de
Chaux Métalliques essayées pour la plu-
part telles qu'elles sortent du sein de la
Terre.*

Lu à l'Académie Royale des Sciences les 16 & 28
Mai 1766.

Par M. D'ARCET, Docteur Régent de la
Faculté de Médecine de Paris.



A PARIS,

Chez P. G. CAVELIER, Libraire, rue
Saint Jacques, au Lys d'or.

M. DCC. LXVI.

Avec Approbation & permission.

MEMOIRE, 1766

author here examines the fusibilities of many minerals,
including talc, various carbonates, gypsum, quartz, etc.
The results of these experiments are contained in this
paper, *Mémoire sur l'Action d'un Feu Égal*, which
was in large measure responsible for the growth of the
French glass and pottery industry. D'Arcet in fact was
the first in France to manufacture true porcelain. Also,
contained within in this book, is the author's description
of the combustibility of diamond, and an account of his
classification system of minerals.

REFERENCES: Beckmann *P.O.B.*: 8 (1766), 83. •
Berlinische Sammlungen: 3 (1766), 623-4 [review]. • BL:
[990.g.8.(1.) Arcet]. • Bolton, *Bibliography of Chemistry*,
1893: 388. • Cole, *Chemical Literature*, 1988: no. 335. •
Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 157.
• Edelstein, *Catalog of the History of Chemistry*, 1981: no.
669. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 40 [under
Arcet]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 149.
• *Göttingische gelehrte Anzeigen*: 1766, p. 1245 [review]. •
Guerlac, ??, Lavoisier—the crucial year. Cornell, 1957?: p.
79. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, 531. • *Journal
des Scavans*: Nov., 1766, 232-43 [review]. • LKG: XI 2. •
Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no.
1092. • Partington, *History of Chemistry*, 1961-70: 3, 104. •
Roller & Goodman, *Catalogue*, 1976: 1, 278. • Sinkankas,
Gemology Bibliography, 1993: no. 1573. • Wellcome Catalog
(Books): 2, 53 [under Arcet].

1245. 2nd Mémoire, 1771: Second Mémoire | Sur L'Action |
D'Un Feu Égal, Violent, | Et Continué Pendant Plusieurs
Jours, | Sur un grand nombre de Terres, de Pierres | & de
Chaux Métalliques, essayées pour | la plupart telles qu'elles
sortent du sein | de la Terre. | Lu à l'Académie Royale
des Sciences les 7 | & 11 Mai 1768. | Par M. D'Arcet,
Docteur Régent de la | Faculté de Médecine de Paris. |
[ornament] | A Paris, | Chez P.G. Cavelier, Libraire, rue

| Saint Jacques, au Lys d'or. | [ornate rule] | M. DCC. LXXI. | Avec Approbation & Permission.

8°: a³ A-K⁸ L⁵; 88ℓ.; [i]-vj, [1]-170 p.

RARE. This second Mémoire describes another long series of fusibility tests on mineral substances. Here, many semi-precious and precious stones are subjected to treatment, including agates, jaspers, alabaster, marble, jade, malachite, lapis lazuli, beryls and most especially diamond.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 1574.

1246. — French, 1776.

Discours en forme de dissertation sur l'état actuel des montagnes des Pyrenées et sur causes de leur dégradation. Paris, 1776.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 386.

1247. — German, 1779.

Abhandlung über die Pyrenaischen Gebirge ... Berlin, 1779.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 387a.

D'ARGENVILLE, Antoine Joseph Dezallier.

See: Dezallier D'argenville, Antoine Joseph.

D'AUBENTON, Louis-Jean-Marie.

See: Daubenton, Louis-jean-marie.

D'HALLOY, Jean Baptiste Julien D'Omalus.

See: Omalus D'halloy, Jean Baptiste Julien D', Baron.

D'OMALIUS D'HALLOY, Jean Baptiste Julien.

See: Omalus D'halloy, Jean Baptiste Julien D', Baron.

D., M.L.M.D.S.

1248. — French, 1667 [First edition].

Denombrement, | Facvlttes Et Origine | Des | Pierres Presievses. | Fait par M.L.M.D.S.D. | [ornament] | A Paris, | Chez André i Bovtonné, au | Balais, sur le grand Petron de la Ste | Chapelle, joignant la petite Porte de | Monsieur le Premier Preside nt, | à la belle Etoile. | [rule] | M. DC. LXVII.

8°: a⁸ (-a1) A-D⁸ E⁴; 43ℓ.; [14], [1]-71, [1] p. PAGE SIZE: 140 x 90 mm.

CONTENTS: [2 pgs], Blanks.; [2 pgs], Title page, verso blank.; [10 pgs], Introduction.; [1]-71, Text.; [1 pg], Blank.

VERY RARE. A general work describing gemstones, containing the typical information, some accurate and some not. Species described are diamond, ruby, sapphire, emerald, topaz, turquoise, opal, amethyst, etc. See Sinkankas (1994) for a detailed description.

REFERENCES: BL: [987.b.33.]. • LKG: XVI 212. • Sinkankas, *Gemology Bibliography*, 1993: no. 1527.

DAHLGREN, Charles Bunker. (BORN: 1839; DIED:) *American civil engineer.*

REFERENCES: ABA: I 393, 38-40. • *Herringshaw's National Library of American Biography*. • *National Cyclopedia of American Biography*. • WBI.

**DENOMBREMENT,
FACVLTEZ ET ORIGINE
D E S
PIERRES PRECIEVSES**

Fait par M. L. M. D. S. D.



A PARIS,

**Chez ANDRÉ i BOVTONNÉ, au
Balais, sur le grand Petron de la Ste
Chapelle, joignant la petite Porte de
Monsieur le Premier President,
à la belle Etoile.**

M. DC. LXVII.

DENOMBREMENT, 1667

1249. — Spanish, 1887.

Minas historicas de la Republica Mexicana revista de las minas descubiertas en los tres ultimos siglos. Escrita con datos tomados de las obras de Humboldt, Ward, Burkart, Egloffstein ... por Charles B. Dahlgren ... Tr. del ingles por orden de la "Sociedad mexicana de mineria," en 1884. Mexico City, Oficina Tipografica de la Secretaria de Fomento, 1887.

8°: vii, [9]-241, ii p., 20 folding maps, folding plans, folding diagrams.

RARE. Historicas mines of the Republica Mexicana magazine of the mines discovered in the three ultimos centuries. Written with data taken from works of Humboldt, Ward, Burkart, Egloffstein by Charles B. Dahlgren Tr. of ingles by order of the "Mexican Society of mineria," in 1884.

REFERENCES: BL. • NUC.

DAHLSTIERNA (Dalstjerna), Gunno Eurelius. (BORN: 1661; DIED: 1709) *Swedish surveyor & cartographer.*

REFERENCES: SBA: Scandinavian Biographical Archive: B-052, 300-303. • *Svenskt Biografiskt Lexikon*. • WBI.

1250. — Latin, 1687 [Dissertation].

Quod. Bene. Vortat. | Ηλεκτρον | Dissertatione Historico-Physicâ | Cum permissu | Venerandæ Facultatis Philosophicæ | In Illustri Academia Philyreâ, | Præside | Serenissimæ Regiæ



DAHLSTIERNA

Majestatis | in Commissione per Livoniam | Geometrâ | M. Gunnone Eurlio | Daliâ-Sveco, | publicæ Eruditorum Censuræ | subjectum | tuebirur | Respondens | Andreas Eurlius | Philosophiæ Baccalaureus & SS. Theologiæ Stud. | fr: | Pridie Calendas Maji Anno Chr. cDc XXXCVII. | In Collegio Principum Majori | Horis | Ante meridiem solitis. | [rule] | Lipsiæ, literis Joh. Georg.

4°: A-C⁴ D²; 14ℓ.

VERY RARE. This dissertation to which Andreas Eurlius was the respondent concerns the "Elektron." As supporting evidence objects from the natural world are described including minerals.

REFERENCES: BL: [B.234.(10.)]. • Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 4, 470. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 154. • LKG: XVI 149. • VD17: 23:292102V.

DAKE, Henry Carl. (BORN: 1896; DIED: Portland, Oregon, 1969) *American dentist, mineral collector & author.*

REFERENCES: *Gems & Minerals Magazine*: Dec., 1969, no. 387, 10. • *Lapidary Journal*: 23 (1969), no. 9, 1285. • *Mineralogical Record*: 7 (1976), no. 4, 1601, portrait. • Sinkankas, *Gemology Bibliography*, 1993: 1, p. 249.

1251. — English, 1938.

Quartz Family Minerals a Handbook for the Mineral Collector by Dake, H. C. ; Fleener, Frank L. ; And Wilson, Ben Hur. McGraw-Hill Book Company, New York, NY (1938).

8°: 304 p., Color, Black & White Illus. Good plus condition; Frontispiece in color; diagrams; illustrations VERY SCARCE.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. ??.

1252. — English, 1943.

Mineral Club History | By | H.C. Dake | Editor, The Mineralogist Magazine | Couch Building—

Portland, Oregon | Price \$1.00 | First Edition—1943 | Copyrighted—1943 | From The Press Of | Durham, Ryan & Downey Co. | Portland, Oregon | 1943.

8°: [1]-64 p., illus (portraits). Wraps, center-stapled. PAGE SIZE: 234 x 154 mm.

CONTENTS: [1-2], Title page, verso "H.C. Dake, Co-Writer of ..."; [3], "Contents."; 4-5, "Preface."; 6-64, Text.

RARE. History of various mineral clubs and societies with in the United States. The text contains names, places and dates for organizations across the country, most of which would now be very difficult to research. An appendix at the end provides information on "Founding a Mineral Society." Scattered throughout the text, portraits of important people enhance the work.



DALBERG

DALBERG, Karl Theodor Anton Maria. (BORN: Hemsheim near Worms, Germany, 8 February 1744; DIED: Regensburg, Bavaria, Germany, 10 February 1817) *German theologian.*

Dahlberg was bishop of Regensburg, archbishop and Elector of Mainz. He was also a counselor to the ruling family.

REFERENCES: Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 510.

1253. — German, 1800.

Ueber die Brauchbarkeit des Steatis zu Kunstwerken der Steinschneider. Erfurt, Beyer und Maring, 1800.

8°: [1]-20 p.

CONTENTS: [1-2], Title page, verso blank.; [3]-20, Text.

RARE. This work is on steatite (or soapstone). Since it can easily be cut, steatite has always been a favorite material with the carver and gem cutter. This paper was read before the Academy of Sciences at Erfurt on 2 October, 1799.

REFERENCES: Jonathan Hill, Bookseller: cat. 11 (1983), no. 44. • Stenger, E., "Carl von Dalbergs Versuche

mit Steatit," *Archiv für Geschichte der Mathematik, der Naturwissenschaften und der Technik*, 11 (1928), 92-110.

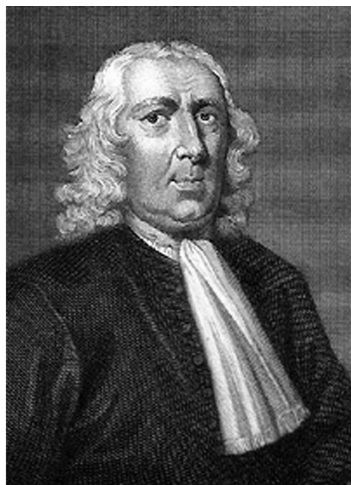
1254. — German, 1811.

Ueber Meteor-Cultus der Alten, vorzüglich in Bezug auf Steine, die vom Himmel gefallen; ein Beytrag zur Alterthumskunde von Fr[iedrich] v[on] Dalberg ... Heidelberg, Mohr und Zimmer, 1811.

8°: vi, 202 p., one plate and vignette.

VERY RARE. This is a study on the worship of meteorites and other stones that were thought to have fallen from Heaven.

REFERENCES: Burke, *Cosmic Debris*, 1986: [not mentioned]. • LKG: XVI 355*.



DALE

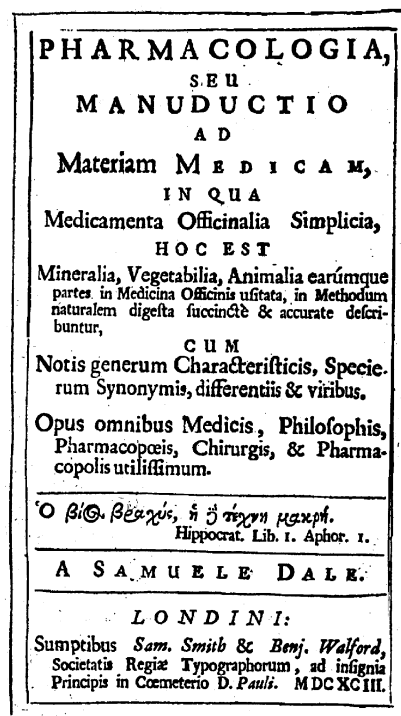
DALE, Samuel. (BORN: 1659?; DIED: 1739) *English physician & antiquarian.*

Dale had a medical practice at Braintree, Essex.

REFERENCES: DNB: 13, 385. • *Nouvelle Biographie Générale* (Hoefer).

1255. — Latin, 1693 [First edition].

[Contained within a double rule box:] Pharmacologia, | Seu | Manuductio | Ad | Materiam Medicam, | In Qua | Medicamenta Officinalia Simplicia, | Hoc Est | Mineralia, Vegetabilia, Animalia earumque | partes in Medicina Officinis usitata, in Methodum | naturalem digesta succincte & accurate descri- | buntur, | Cum | Notis generum Characteristicis, Specie- | rum Synonymis, differentiis & viribus. | Opus omnibus Medicis, | Philosophis, Pharmacopis, Chirurgis, & Pharma- | copolis utilissimum. | [rule] | [Quotation in Greek signed Hippocrat] | [rule] | A Samuele Dale. | [rule] | Londini: | Sumptibus Sam. Smith & Benj. Walford, | Societatis Regiæ Typographorum, ad insignia | Principis in Coemeterio D. Pauli. M DC XCIII.



PHARMACOLOGIA, 1693

12°: [59], 1-656, [4] p. Included index.

CONTENTS: [2 pgs], Blank, verso "Hunc Librum ..."; [2 pgs], Title page, verso blank.; [1 pg], Dedication.; [1 pg], Blank.; [5 pgs], "Præfatio."; [1 pg], Blank.; [2 pgs], "Nominum Abbreviatorum Dilucidatio." [=abbreviations].; [30 pgs], "Officina Simplicium."; [11 pgs], "Catalogus Pharmacorum omnium quæ | apud Sepiasarios, Londinensis (vul- | go Druggists dictor) Venalia Pro- | stant."; [1 pg], "Errata."; [3 pgs], "Libri impressi sumptibus Sam. Smith ..." [=advertisement]; 1-649, Text.; 650-656, Appendix.; [4 pgs], Publisher's list.

RARE. This handbook of pharmacy provides recipes for various remedies and cures against all manner of ailments using prescriptions derived from minerals, vegetables, and animals. The text is divided into four books. The first, "De Mineralogia," (pp. 37-101) treats medicinal waters, minerals and stones. Brief descriptions with supposed curative properties are reported for about 40 species including clay, marl, sulfur, arsenic, bitumen, various salts, magnet, hematite, cinnabar, cobalt, bismuth, antimony, iron, tin, gold, silver, lead, copper, pumice, chrysocolla, carbuncle, lapis lazuli, diamond, talc, selenite, alabaster, Ætite, sardonyx, nephrite, garnet, ruby, amethyst, sapphire, topaz, beryl, emerald, opal, etc. Book two covers "Phytologia" (pp. 102-523) and includes cures derived from corals, fungus, sponges, etc. The third book contains zoology (pp. 524-642), while book four discusses "Anthropologia" (pp. 643-649). An appendix concludes the text. The book was a very popular work going through at least five editions by 1751. Interestingly, it contains the first use of the word Pharmacology, which Dale derived from two Greek

DAMMER

words, Pharmakon and Logos, which mean drug and science, respectively.

2nd edition, 1710: *Pharmacologia, seu, Manuductio ad materiam medicam ...* Iterata editio, emendata & aucta. Londini, Apud Benj. Walford ..., 1710. 12°: A⁶ B-Ee¹² Ff²; 332 leaves.; [12], [1]-652 p.

3rd edition, 1737: *Pharmacologia, seu manuductio ad materiam medicam.* Tertia editio, multis emendata & aucta. Londini, Impensis Gul. Innys & Ric. Manby, 1737. 4°: [a]⁴ b⁴ c² B-Mmm⁴ Nnn²; ?? leaves.; [6], vii, [7], 459, [1] p.

4th edition, 1739: *Samuelis Dalei, M. L. Pharmacologia, seu Manuductio ad Materiam Medicam ...* 4. editio. Lugduni Batavorum, Joh. Arnold Langerak, 1739. 4°: xii, 459 p.

5th edition, 1751: *Samuelis Dalei, M.L. Pharmacologia, seu, Manuductio ad materiam medicam ...* Quinta editio ex scriptis Hermanni Boerhaave locupletata, indice Gallico, Germanico, Belgico aucta. Lugduni Batavorum: Impensis Gerardi Potuliet, 1751. 4°: *-**⁴ A-Sss⁴; ?? leaves.; [4], [i]-vii, [5], [1]-459 (i.e., 461), [51] p., [1] leaf of plates, illus., portait.

Edited by Herman Boerhaave [1668-1738].

REFERENCES: Wing: D-126.

1256. — English, 1730 [First edition].

The | History | And | Antiquities | Of | Harwich and Dovercourt, | In the County of Essex, | By Silas Taylor, Gent. | To which is added a large | Appendix | containing | The Natural History of the Sea-Coast and Country about | Harwich, particularly the Cliff, the Fossils, Plants, Trees, | Birds and Fishes, &c. | Illustrated with Variety of Copper Plates. | [rule] | By Samuel Dale, | Author of the Pharmacologia. | [rule] | London: | Printed for C. Davis in Pater-noster Row, T. Osborn in | Gray's-Inn, and H. Lintot at the Cross Keys against St. Dunstan's | Church in Fleet-street. MDCCXXX.

4°: π^2 a-c⁴ B-Z⁴ Aa-Zz⁴ Aaa-Mmm⁴ Nnn³; 246ℓ.; [4], [i]-xxiv, 1-464 p., 14 plates.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pgs], Dedication to Hans Sloan, signed Samuel Dale.; [1 pg], Blank.; i-xii, "To The | Reader."; xiii-xxiv, "A | Catalogue | Of | Authors."; 1-255, Text of the history & antiquities.; [256], Blank.; 257-452, "The | Appendix, | Containing | Additions and Emendations."; 453-456, "A | Supplement | To the foregoing | Appendix."; 457-464, "Index."

VERY SCARCE. To this work by Silas Taylor [see note below] on the history and antiquities of Harwich and Dovercourt, Dale has added a long appendix dealing with the natural history of the region, including a study of the mineralogy. In "To The Reader" Dale notes that this is the first printing of Taylor's *History*, which had been written in 1676. Dale then provides a biographical sketch of Taylor's life and continues the book with a bibliography of about 200 works consulted in his notes (about 20 of these are mineralogical in content). The history of Harwich is then presented covering from antiquity through the middle of the 17th century. The text is divided into the five sections of topography, natural history, dynastic history of the town, municipal, political or civil constitution of the town, and historical notes. Dale felt however that Taylor's section on natural history was

somewhat lacking and so he included a long appendix that describes all aspects of the natural history of the area, including its geology and mineralogy. Dale provides descriptions of the fossil shells and teeth, pyrite and quartz crystals found in the area, some of which are pictured on plates 10 to 13.

Silas Taylor. (BORN: Harley, Shropshire, England, 16 July 1624; DIED: Harwick, England, 4 November 1678) *English antiquarian.* Taylor fought on Cromwell's side in the English Civil War, and he was rewarded. However, after the restoration of the King, he lost all that he had gained, but due to obligations owed him by connected persons, he was appointed Keeper of the King's storehouses in Harwick. He was a collector of all objects, especially manuscripts and antiques.

REFERENCES: BL: [578.g.37]. • LKG: XIV 416 & 417. (Taylor)

1257. 2nd edition, 1732: The | History | And | Antiquities | Of | Harwich and Dovercourt, | In the County of Essex, | By Silas Taylor, Gent. | To which is added a large | Appendix | containing | The Natural History of the Sea-Coast and Country about | Harwich, particularly the Cliff, the Fossils, Plants, Trees, | Birds and Fishes, &c. | Illustrated with Variety of Copper Plates. | [rule] | By Samuel Dale, | Author of the Pharmacologia. | [rule] | The Second Edition. | [rule] | London: | Printed for C. Davis in Pater-noster Row, T. Osborn in | Gray's-Inn, and H. Lintot at the Cross Keys against St. Dunstan's | Church in Fleet-street. MDCCXXXII.

4°: π^2 a-c⁴ B-Z⁴ Aa-Zz⁴ Aaa-Mmm⁴ Nnn³; 246ℓ.; [4], [i]-xxiv, 1-464 p., 14 plates. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pgs], Dedication to Hans Sloan, signed Samuel Dale.; [1 pg], Blank.; i-xii, "To The | Reader."; xiii-xxiv, "A | Catalogue | Of | Authors."; 1-255, Text of the history & antiquities.; [256], Blank.; 257-452, "The | Appendix, | Containing | Additions and Emendations."; 453-456, "A | Supplement | To the foregoing | Appendix."; 457-464, "Index."

REFERENCES: BL: [440.g.27].

DAMMER, Bruno. (BORN: 1876; DIED:) German geologist & mineralogist.

Dammer worked for the German Geological Survey out of Berlin.

1258. — German, 1913 [First edition].

Die | Nutzbaren Mineralien | mit Ausnahme der | Erze, Kalisalze, Kohlen und des Petroleums | von | [left:] Dr Bruno Dammer | [... lines of titles and memberships...] | und | [right:] Dr. Oskar Tietze | [... lines of titles and memberships...] | Mit Beiträgen von | [... 5 lines...] | Zwei Bande. | I [-II]. | Mit 57 [-93] Abbildungen. | [ornament] | Stuttgart. | Verlag von Ferdinand Enke. | 1913 [-1914].

2 vols. [VOL 1: 1913] 8°: xv, 501 p., 57 illus., plates. [VOL 2: 1914] 8°: xii, 539, [1], [4] p., 93 illus., plates.

SCARCE. Co-authored with Oskar Tietze [-]. This work is a survey of the world's mineral resources, excepting ores, coal and petroleum.

2nd edition, 1927-8: *Die nutzbaren Mineralien, mit Ausnahme der Erze, und Kohlen von Dr. Bruno Dammer ... und Dr. Oskar Tietze unter Mitwirkung von Landesgeologen Prof. Dr. Richard Bärtling [etc.] Bearbeiten von Prof. Dr. Bruno Dammer ...* Zwei bände. 2. neubearb. Aufl. Stuttgart, F. Enke, 1927-1928. 2 vols. [Vol 1: 1927] xix, [1], 554, [2] p., 66 illus.; [Vol 2: 1928] xv, 785, [3] p., 128 illus. [Sinkankas, no. 1567].

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 1566.



EDWARD S. DANA

DANA, Edward Salisbury. (BORN: New Haven, Connecticut, U.S.A., 16 November 1849; DIED: New Haven, Connecticut, U.S.A., 16 June 1935) *American mineralogist.*

Son of JAMES DWIGHT DANA, Edward was educated at Yale, receiving an A.B., 1870, a M.A., 1874, and a Ph.D., 1876. He did advanced studies at Heidelberg under GOLDSCHMIDT and in Vienna. He was curator of the Yale mineral collection from 1874 to 1922, assistant professor of natural philosophy, 1879 to 90, professor of physics, 1890 to 1917, and professor emeritus from 1917. He followed his father and became an editor of the *American Journal of Science* in 1875. Edward held membership in the National Academy of Science, American Philosophical Society, and the American Academy of Arts and Sciences. He wrote primarily on mineralogy and physics.

REFERENCES: ABA: I 396, 141-152, 219-222. • Adams, *Dictionary of American Authors*, 1904: 86. • Cleavelly, *World Palaeontological Collections*, 1983: 96. • DAB: Suppl. 1, 221-2. • Elliott, *Biographical Dictionary*, 1979: 71. • *ISIS*, 1913-65: 1, 306. • *National Cyclopaedia of American Biography*: 30, 332. • Poggendorff: 3, 324-5 & 4, 295. • Sarjeant, *Geologists*, 1980: 2, 808-9. • WBI. • *World Who's Who in Science*: 405.

Fifth Edition System Appendices

1259. Appendix 2, 1875: Second Appendix | To The | Fifth Edition | Of | Dana's Mineralogy, | By | Edward S. Dana, | Curator Of Mineralogy, Yale College. | Completing The Work To 1875. | New York: | John Wiley & Sons, | 15 Astor Place. | 1875.

8°: [i]-x, [1]-64 p., illus. PAGE SIZE: 232 x 145 mm.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1875, | by J.D. Dana, ..."; [iii], "Prefactory Note."—dated March 1875.; [iv]-vi, "List Of Mineralogical Works."; [vii]-viii, "List Of Mineralogical Memoirs."; [ix]-x, "List Of New Species."; [1]-64, Text.

SCARCE. This second appendix contains descriptions for all minerals proposed as new since the publication in 1872 of the *First Appendix* to Dana's Fifth edition. About 65 were new species.

REFERENCES: NUC: 132, 167-71.

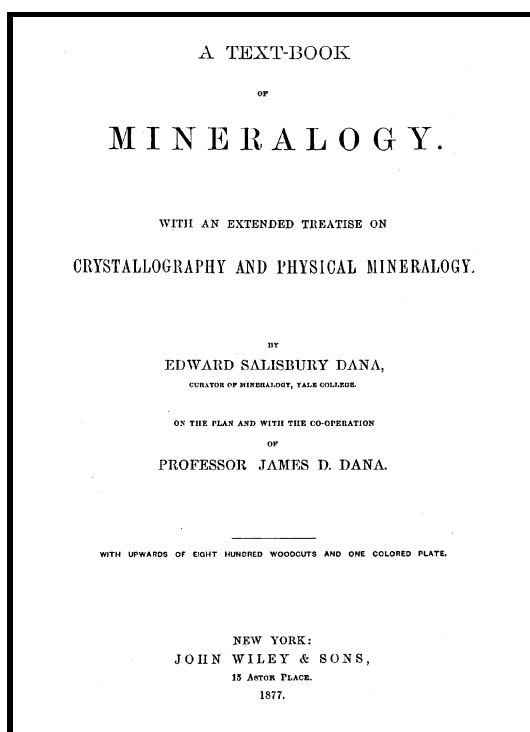
1260. Appendix 3, 1882: Third Appendix | To The | Fifth Edition | Of | Dana's Mineralogy, | By | Edward S. Dana, | Curator Of Mineralogy, Yale College. | Completing The Work To 1882. | New York: | John Wiley & Sons, | 15 Astor Place. | 1882.

8°: [i]-xiii, [1], [1]-134 p., illus.

CONTENTS: [i-ii], Title page, verso "Copyright, | 1882, | By E.S. Dana."; iii, "Prefactory Note."—dated 1 April 1882.; [iv], Blank.; v-x, "Bibliography."; xi-xiii, "Classified List Of New Names."; [1 pg], Blank.; 1-134, Text.

SCARCE. The third appendix prepared to supplement the fifth edition of JAMES D. DANA's *System of Mineralogy* (New York, 1868), and make that work complete up to January, 1882. It contains descriptions for about 300 minerals proposed as new since the publication in 1875 of the *Second Appendix*; however, many of these were incompletely described. The bibliography contains a list of works published since January, 1875.

REFERENCES: NUC: 132, 167-71.



TEXT-BOOK OF MINERALOGY, 1877

Textbook of Mineralogy

1261. — English, 1877 [First edition].

A Text-Book | Of | Mineralogy. | With An Extended Treatise On | Crystallography And Physical Mineralogy. | By | Edward Salisbury Dana, | Curator Of Mineralogy, Yale College. | On The Plan And With The Co-Operation | Of | Professor James D. Dana. | [rule] | With Upwards Of Eight Hundred Woodcuts And One Colored Plate. | [rule] | New York: | John Wiley & Sons, | 15 Astor Place. | 1877.

DANA

8°: [i]-viii, [2], [1]-485, [1], [1]-15, [1] p., colored frontispiece (showing optical dispersion in crystals). PAGE SIZE: 232 x 140 mm.

CONTENTS: [i-ii], Title page, verso "Copyright By | Edward S. Dana, | 1877."; [iii]-iv, "Preface."—dated 1 March 1877.; [v]-vi, "Table Of Contents."; [vii]-viii, "Introduction."; [1 pg], "Abbreviations Employed In The Description Of Species."; [1 pg], Blank.; [1]-397, Text.; [398], Blank.; [399]-420, "Appendix A. | Synopsis Of Miller's System Of Crystallography."; [421]-430, "Appendix B. | On The Drawing Of Figures Of Crystals."; [431]-446, "Appendix C. | Tables to be used in the Determination Of Minerals."; [447]-476, "Appendix D. | Catalogue Of American Localities Of Minerals."; [477]-485, "General Index."; [1 pg], Blank.; [1]-15, Advertisements for John Wiley and Sons books for sale.; [1 pg], Blank.

SCARCE. Written with the help of JAMES DWIGHT DANA, this work was executed with the science student in mind. One half of the text is occupied with descriptions of crystallography, physical, chemical and determinative mineralogy, while the other half contains the descriptions of species and a catalogue of American mineral localities. The subjects of crystallography and optical mineralogy are treated at length so that the student may acquire the special knowledge needed for complete mineral investigations. For this section fine illustrations and descriptions of the best instruments are given, as well as numerous diagrams and figures of crystals. Descriptive crystallography is covered with sections concerning mathematical crystallography following the systems of Nauman and Miller's. Each of these subjects is also very fully illustrated by figures. In addition, a chapter covering the optical characters of minerals, is among the finest treatments ever printed in the English language. Besides there is a bibliography of the subjects considered under physical mineralogy.

The descriptive mineralogy of the volume follows in essence the classification set forth in James D. Dana's *System of Mineralogy* (5th ed., New York, 1868), and is in fact an abridgement of that work. All new species reported since the publication of the *System* have been included. However, of the species listed, the most common are given lengthy descriptions, while rarer ones are described only briefly. For fuller information, the student is referred to the more comprehensive *System of Mineralogy*.

Other issues: The *Textbook* was immensely popular in American schools of higher education and this first edition was reissued each year from 1877 to 1896, with no major changes to the text.

REFERENCES: *American Journal of Science*: 3rd Series, 13 (1877), 3317 [review]. • NUC: 132, 167-71.

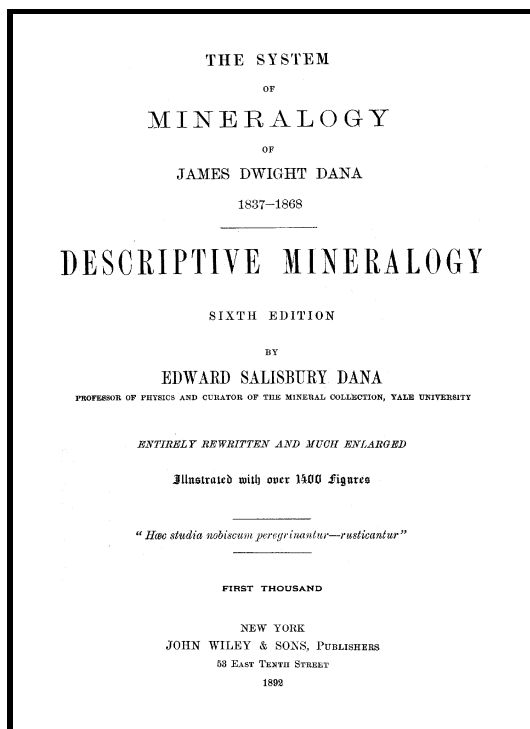
1262. 2nd edition, 1898: A Text-Book | Of | Mineralogy | With An Extended Treatise On | Crystallography And Physical Mineralogy | By | Edward Salisbury Dana | Professor of Physics and Curator Of Mineralogy | Yale University | New Edition, Entirely Rewritten And Enlarged | With nearly 1000 Figures and a Colored Plate | New York | John Wiley & Sons | London: Chapman & Hall, Limited | 1898.

8°: [i]-vii, [1]-593 p., frontispiece (colored), illus., diags. Includes index and bibliography.

SCARCE. The first major revision of the *Textbook*, occurred in 1898 bringing the text up to date and making it a good companion to the author's *System of Mineralogy* (New York, 1892).

Other editions and issues: The second edition of the *Textbook* continued to be very popular in mineralogy classes in colleges and universities throughout America. It was reissued almost every year from its first appearance to 1920. Then, the text was again revised by William E. Ford, and published as a "Third Edition" in 1922 (8°: ix, 720 p., illus., diags.) and in 1932 as a "Fourth Edition" (8°: [4], iii-xi, 851 p., illus., diags.) when Ford did his last revision.

REFERENCES: *American Journal of Science*: 4th Series, 6 (1898), 275-6 [review]. • NUC: 132, 167-71.



SYSTEM OF MINERALOGY, 1892

System of Mineralogy

1263. — English, 1892 [First issue].

The System | of | Mineralogy | of | James Dwight Dana | 1837—1868 | [rule] | Descriptive Mineralogy | Sixth Edition | by | Edward Salisbury Dana | Professor Of Physics And Curator Of The Mineral Collection, Yale University | Entirely Rewritten And Much Enlarged | Illustrated with over 1400 figures | [rule] | "Hæc studia nobiscum peregrinantur—rusticantur" | [rule] | First Thousand | New York | John Wiley & Sons, Publishers | 53 East Tenth Street | 1892.

4°: [i]-lxiii, [1], [1]-1,134 p., over 1,400 illus., biblio., index. PAGE SIZE: 260 x 165 mm.

CONTENTS: [i-ii], Title page, verso "Copyright, 1892, | By | Edward S. Dana."; iii-x, "Preface."; xi-xii, "Table of Contents."; xiii-lxii, "Introduction."; [1 pg], Blank.; [1]-1024, Descriptive mineralogy.; 1025-1052, "Supplement.";

1053-1104, "Catalogue Of American Localities Of Minerals."; 1105-1134, "Index To Species."

SCARCE. Often called the sixth edition of Dana, this book was at its publication the single most comprehensive mineralogy treatise ever published and the measure to which many subsequent works would be compared. As the author states in the preface, in the twenty-four years since the appearance of the previous edition, the science of mineralogy had made rapid progress. This was evident in the many new periodicals and journals recently founded that were devoted in whole or in part to mineralogical pursuits, and the nearly one thousand new mineral species added to this edition of the *System*.

Edward erected this comprehensive work on the solid foundation of the fifth edition of the *System* (New York, 1868), written by his father, JAMES DWIGHT DANA and GEORGE JARVIS BRUSH. From there he added all the latest knowledge about species and mineralogical investigation, and created a mineralogical reference that rarely was supplanted by other works. In fact, the larger page format allowed Dana to increase the amount of text by about a third over the previous edition. It was the best mineralogical work published since the inception of the science and soon became a standard in every library and geological department throughout America and Europe. However, it was the comprehensive nature that created its downfall. The science was rapidly changing because new technologies were adding new mineral species and invalidating many others. Although several appendices were published to keep this massive and at the time unique reference up to date [which see below], this reference became outdated by the rapid progress of the science.

The introduction begins by listing the form each mineral species description will take. This is followed by comprehensive reviews of crystallography, physical mineralogy, chemical mineralogy, and nomenclature. The introduction concludes with an extensive and important bibliography of mineralogy and crystallography [pp. xlv-lxi]. The descriptive mineralogy then commences. For each mineral, comprehensive details are given about the name and variants, its first description, the crystalline form and structure, the physical characters such as hardness, specific gravity, optics, taste and odor, the chemical composition, the pyrognostic (blow-pipe analyses), the occurrences and associated minerals, alteration forms, artificial production, and references.

Other issues: The *System* was very popular. The second printing declaring "Second Thousand" on the title page appeared in 1893. Consequently, the text was issued many times over the next years. Like the previous fifth edition, three appendices were written in an attempt to keep the text up to date. They appeared in 1899, 1909 and 1915 [see their descriptions below]. Although these appendices were bound and sold separately, in some cases they were also bound up at the end of the sixth edition's text, creating a comprehensive, though bulky book. The last such issue was c1937. The following list provides the first year and make up of these issues.

- 1899, bound with 1 appendix.
- 1909, bound with 2 appendices.
- 1915, bound with 3 appendices.

REFERENCES: NUC: 132, 167-71. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

Sixth Edition System Appendices

1264. Appendix 1, 1899: First Appendix | To The | Sixth Edition | Of | Dana's System Of Mineralogy | By | Edward S. Dana | Professor Of Physics And Curator Of Mineralogy Yale University | Completing the Work to 1899 | New York | John Wiley & Sons | London: Chapman & Hall, Limited | 1899.

8°: [i]-x, [1]-75, [1] p. PAGE SIZE: 260 x 166 mm.

CONTENTS: [i-ii], Title page, verso "Copyright, 1899, | By | Edward S. Dana."; iii, "Prefatory Note."; [iv], Blank.; v-vi, "Bibliography."; vii-x, "Classified List Of New Names."; [1]-75, Text.; [1 pg], Blank.

SCARCE. All new minerals described between 1892 and 1899 are included. Of these, about forty were new species.

REFERENCES: NUC: 132, 167-71.

1265. Appendix 2, 1909: Second Appendix | To The | Sixth Edition | Of | Dana's System Of Mineralogy | By | Edward S. Dana | Professor Of Physics And Curator Of Mineralogy, Yale University | And | William E. Ford | Assistant Professor Of Mineralogy, Sheffield Scientific School Of | Yale University | Completing the Work to 1909 | New York | John Wiley & Sons | London: Chapman & Hall, Limited | 1909.

8°: [2], [i]-xi, [1], 1-114 p., biblio., illus. PAGE SIZE: 260 x 165 mm.

CONTENTS: [1 pg], Blank.; [1 pg], Publisher's list of works concerning Dana's Mineralogies.; [i-ii], Title page, verso "Copyright, 1909, | By | Edward S. Dana. | ..."; iii, "Prefatory Note."—dated 1 July 1909.; [iv], Blank.; v-vi, "Bibliography."; vii-xi, "Classified List Of New Names."; [1 pg], Blank.; 1-114, "Appendix II."

SCARCE. Co-authored by WILLIAM EBENEZER FORD. All new minerals described between 1899 and 1909 are included. Of these about sixty are new species.

REFERENCES: NUC: 132, 167-71.

Third Appendix to the Sixth Edition of Dana's System of Mineralogy. By William E. Ford ... Completing the Work to 1915. (New York, 1915).

See: Ford, William Ebenezer.

1266. — English, 1893.

Catalogue | Of | American Localities | Of | Minerals. | By | Edward Salisbury Dana, | Professor Of Physics And Curator Of The Mineral Collection, Yale University. | Reprinted From The Sixth Edition | Of | Dana's System Of Mineralogy. | New York: | John Wiley & Sons. | London: Chapman & Hall, Limited. | 1893.

8°: [6], [1]-51, [1] p. PAGE SIZE: 260 x 174 mm.

CONTENTS: [2 pgs], Title page, verso "Copyright by | Edward S. Dana. | 1893."; [1 pg], "Preface."; [1 pg], Blank.; [1 pg], "Index of States and Territories."; [1 pg], Blank.; [1]-51, Text.; [1 pg], Blank.

VERY SCARCE. At the end of his *System of Mineralogy*, Edward Dana included a list of states and territories with locations where specific mineral species had been found in The United States. It was intended to aid the mineral collector in selecting routes and arranging collecting trips. Apparently, this section was popular enough that the publisher ultimately issued it separately in 1893. Compared to the first American descriptions of a few minerals to be found in Thomas Harriot's *A Brief and True Report of the New Found*

DANA

Land of Virginia (1st ed., London, 1588), Dana's *Catalogue* shows a multifold increase.

REFERENCES: NUC: 132, 167-71.

Minerals

1267. — English, 1895 [First edition].

Minerals, | and | How To Study Them. | A Book For Beginners In Mineralogy. | By | Edward Salisbury Dana, | [...3 lines of titles and memberships...] | With more than 300 Illustrations. | First Edition | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited.

12°: [i]-vi, [1]-380 p., frontispiece, 319 illus., diags. PAGE SIZE: 180 x 124 mm.

CONTENTS: [Frontispiece: Quartz crystal from North Carolina]; [i-ii], Title page, verso copyright information.; iii-iv, "Preface."—dated 1 July 1895.; v-vi, "Table Of Contents."; [1]-364, Text.; 365-367, "Appendix."; [368], Blank.; 369-372, "General Index."; 378-380, "Index To Mineral Species."

SCARCE. A small, popular work on elementary mineralogy, the purpose of which was to teach in a self paced manner, individuals interested in the science of mineralogy. The essential elements of the science are given in a concise and clear language that is informative and easy to read. Interesting photos and other illustrations enhance the text.

The first part of the text covers basic introductions to crystallography and the seven crystal systems, physical properties of minerals, like fracture, cleavage, color, and transparency, chemical characters and the use of the blowpipe. A basic descriptive mineralogy occupies most of the second half of the book with the minerals selected being collector species. A section at the end describes the determination of an unknown mineral.

REFERENCES: *American Journal of Science*: Series 3, 50 (1895), 274 [review]. • NUC: 132, 167-71.

1268. 2nd edition, 1895: Minerals, | and | How To Study Them. | A Book For Beginners In Mineralogy. | By | Edward Salisbury Dana, | [...3 lines of titles and memberships...] | With more than 300 Illustrations. | Second Revised Edition | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited.

12°: [i]-vi, [1]-380 p., frontispiece, 319 illus., diags. PAGE SIZE: 180 x 124 mm.

CONTENTS: [Frontispiece: Quartz crystal from North Carolina]; [i-ii], Title page, verso copyright information.; iii-iv, "Preface."—dated 1 July 1895.; v-vi, "Table Of Contents."; [1]-364, Text.; 365-367, "Appendix."; [368], Blank.; 369-372, "General Index."; 378-380, "Index To Mineral Species."

VERY SCARCE. This small manual has enjoyed a wide popularity to the present time, with the latest revised edition having been published in 1997.

REFERENCES: NUC: 132, 167-71.

1269. — English, 1910 [2nd edition, issue D].

A Text-Book Of Mineralogy. With an Extended Treatise on Crystallography and Physical Mineralogy. By Edward Salisbury Dana ... New Edition, Entirely Rewritten and Enlarged. With nearly 1000 Figures and a Colored Plate. New York: John Wiley

& Sons. London: Chapman & Hall, Limited, 1910. 8°: VERY SCARCE.

1270. — English, 1922 [3rd edition, issue A].

A Text-Book | Of | Mineralogy | With An Extended Treatise On | Crystallography And Physical Mineralogy | By | Edward Salisbury Dana | Professor Emeritus of Physics and Curator of Mineralogy | Yale University | Third Edition, Revised And Enlarged | By | William E. Ford | Professor of Mineralogy, Sheffield Scientific School of | Yale University | Total Issue, Twenty-Seven Thousand | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited | 1922.

8°:

VERY SCARCE. Co-authored with William Ebenezer Ford [q.v.].

1271. — English, 1932 [4th edition, issue A].

A Text-Book | Of | Mineralogy | With An Extended Treatise On | Crystallography And Physical Mineralogy | By | Edward Salisbury Dana | Professor Emeritus of Physics, Yale University | Fourth Edition, Revised And Enlarged | By | William E. Ford | Professor of Mineralogy and Curator of the Mineral Collections, | Sheffield Scientific School of Yale University | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited | 1932.

8°:

VERY SCARCE. Co-authored with William Ebenezer Ford [q.v.].

REFERENCES: *American Journal of Science*: 3rd Series, 13 (1877), 317. • Dana's 7th (Bibliography): 69.

1272. — English, 1893 [Issue B].

The System | of | Mineralogy | of | James Dwight Dana | 1837—1868 | [rule] | Descriptive Mineralogy | Sixth Edition | by | Edward Salisbury Dana | Professor Of Physics And Curator Of The Mineral Collection, Yale University | Entirely Rewritten And Much Enlarged | Illustrated with over 1400 figures | [rule] | "Hæc studia nobiscum peregrinantur—rusticantur" | [rule] | Second Thousand | New York | John Wiley & Sons, Publishers | 53 East Tenth Street | 1893.

4°: [i]-lxiii, [1], [1]-1134 p., over 1400 illus., biblio., index. PAGE SIZE: 260 x 165 mm.

CONTENTS: [i-ii], Title page, verso "Copyright, 1892, | By | Edward S. Dana."; iii-x, "Preface."; xi-xii, "Table of Contents."; xiii-lxii, "Introduction."; [1 page], Blank.; [1]-1024, Descriptive mineralogy.; 1025-1052, "Supplement."; 1053-1104, "Catalogue Of American Localities— | ties Of Minerals."; 1105-1134, "Index To Species."

SCARCE. That this work was popular is evident by the fact that this second issue of one thousand copies appeared a year after the original issue of 1892.



JAMES DWIGHT DANA

REFERENCES: Hoover Collection: no. 248 [1904 edition].

DANA, James Dwight. (BORN: Utica, New York, U.S.A., 2 February 1813; DIED: New Haven, Connecticut, U.S.A., 14 April 1895) *American mineralogist & geologist.*

Dana was born into a merchant's family of modest means. Through determination and a zeal for learning he was able to enter Yale college where he came under the influence of Benjamin Silliman, professor of chemistry. It was this close association that nurtured Dana's interest in natural history and most particularly mineralogy and geology. Upon his graduation from Yale in 1833, Dana accepted the post of instructor to midshipmen aboard the U.S.S. Delaware. In 1836, two years after his return home, Silliman was able to offer Dana an assistant-ship in the chemical laboratory at Yale. In this position, Dana made many scientific contacts and doubtless this led to an invitation to join the Wilkes expedition of 1838-1842. This enterprise is one of the great episodes in the history of American science. The purpose was to circumnavigate the globe, charting and conducting natural history surveys in Polynesia and confirming the existence of the Antarctic continent. Dana shipped out as a geologist, and when the expedition's conchologist was dismissed at Sydney, Dana took on the role of marine biologist as well. For four years the world was his laboratory, an experience that gave "Dana a competence in natural history matched in his own day only by Darwin's on the *Beagle*" [DSB]. Upon his return to New Haven, Dana commenced publishing his observations made on this remarkable voyage. This appeared as *Zoöphytes, Crustacea and Geology*, a work that although very specialized was none the less very popular reading among the general public. His global experience also gave great merit to his arguments in support of Darwin's theory of evolution. When a position opened, he was made professor of mineralogy and geology at Yale. In 1844, Dana married Henriette Frances Silliman [1823-1907], daughter of his Yale collaborator, Benjamin Silliman.

Together they had four children, one of whom, EDWARD SALISBURY DANA also became a renowned mineralogist. Subsequently, James Dwight Dana became editor of the *American Journal of Science*, which had been founded by Silliman in 1818. Through this oracle, as well as teachings, many articles and books, Dana devoted his life to the expansion of scientific knowledge. Dana held membership in every important scientific throughout the world. He was the recipient of both the Copley Medal (Royal Society of London) and the Wollaston Medal (Geological Society of London), a feat few others have accomplished. In 1866, the silicate mineral "Danalite" was named in his honor by J.P. Cooke.

REFERENCES: ABA: I 396, 216-238. • *American Journal of Science*: 3rd Series, 4 (1895), 329-56, portrait. • Barr, *Index to Biographical Fragments*, 1973: 61. • *Catalogue of Portraits of Naturalists*: 336 [1 portrait listed]. • Cleveley, *World Palaeontological Collections*, 1983: 96. • DAB: 3, 55-6 [by G.P. Merrill]. • Dall, W.H., *Spencer Fullerton Baird, A Biography including selections from his correspondence with Audubon, Agassiz, Dana, and others*. Philadelphia: Lippincott, 1915. [i]-xvi, [1]-462 p. • DSB: 3, 549-54 [by W. Stanton]. • Elliott, *Biographical Index*, 1990: 57. • Elliott, *Biographical Dictionary*, 1979: 71. • *Encyclopaedia Britannica*, 11th edition. • Fleener, F.L., "Dana of the Dana's," *Mineralogist (Formerly the Oregon Mineralogist)*, 13 (1945), no. 1, 3-4. • Gilman, D.C., *The life of J.D. Dana, scientific explorer, mineralogist, zoologist*. New York, 1895. 409 p. • *ISIS*, 1913-65: 1, 306. • Lambrecht & Quenstedt, *Catalogus*, 1938: 103. • Poggendorff: 1, cols. 516-7, 3, 323 & 4, 294-5. • Prendergast, M.L., *James Dwight Dana: The life and thought of an American scientist*. Ph.D. Dissertation. University of California, Los Angeles, 1978. 640 p. [University Microfilms, Ann Arbor, Michigan, order no. 79-01390]. • Sanford, W.F., "Dana and Darwinism," *Journal of the History of Ideas*, 26 (1965), 531-46. • Sarjeant, *Geologists*, 1980: 2, 809-12, Suppl. 1 (1986), 1, 364 & Suppl. 2 (1995), 1, 542-3 [other refs.]. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: 1, 595. • WBL. • Wilson, *Benjamin Silliman and his circle*, 1979. • *World Who's Who in Science*: 405.

The Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University. By Daniel C. Gilman ... (New York and London, 1899).

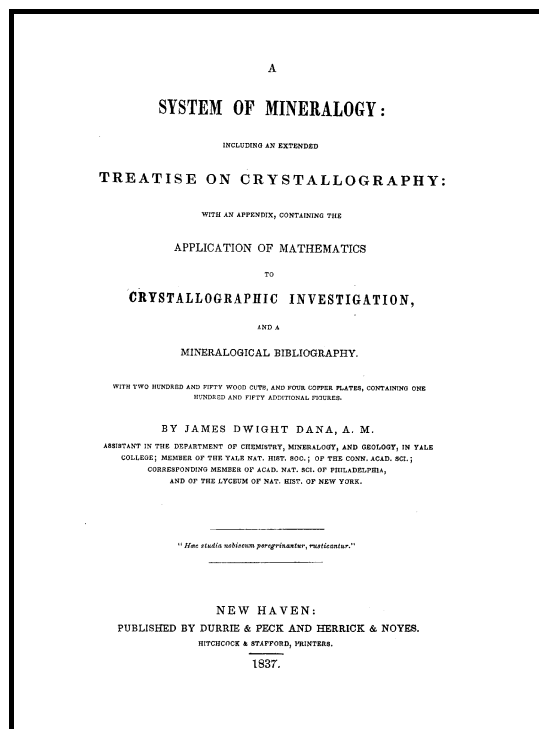
See: Gilman, Daniel Coit.

System of Mineralogy

1273. — English, 1837 [First edition].

A | System Of Mineralogy: | Including An Extended | Treatise On Crystallography: | With An Appendix, Containing The | Application Of Mathematics | To | Crystallographic Investigation, | And A | Mineralogical Bibliography. | With Two Hundred And Fifty Wood Cuts, And Four Copper Plates, Containing One | Hundred And Fifty Additional Figures. | By James Dwight Dana, A.M. | [...4 lines of titles and memberships...] | [rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [rule] | New Haven: | Published By Durrie & Peck and Herrick & Noyes. | Hitchcock & stafford, Printers. | [rule] | 1837.

8° in 4s: π^3 B⁴ 1-18⁴ 19*⁴ 19-56⁴ 57² χ^4 App.-B-App.-O⁴: 297 ℓ .; [i]-xiv, 1-144, *145-152*, [145]-452, [1]-119, [1] errata p., 4 folding plates, about 250 text woodcuts, biblio., index. PAGE SIZE: 224 x 138 mm.



SYSTEM OF MINERALOGY, 1837

CONTENTS: [i-ii], Title page, verso "[rule] | Entered, | According to Act of Congress, in the year 1837, by | Durrie & Peck and Herrick & Noyes, | ..."; [iii]-vi, "Preface."—dated 1 May 1837.; [vii]-xiv, "Contents."; [1]-4, "Introduction."; [5]-70, "Mineralogy. | [rule] | Part I. | Crystallography. | Or, The Science Of The Structure Of Minerals."; [71]-86, "Part II. | Physical Properties Of Minerals."; [87]-91, "Part III. | Chemical Properties Of Minerals."; [92]-104, "Part IV. | Taxonomy."; [105]-152*, "Part V. | Determinative Mineralogy."; [145]-444, "Part VI. | Descriptive Mineralogy."; [445]-452, "Supplement."; [1]-80, "Appendix A. | Mathematical Crystallography."; [81]-88, "Appendix B. | Chemical Classification."; [89]-106, "Catalogue | Of | Works On Mineralogy."; [107]-119, "Index."; [1 pg], "Errata."; [At end], Four plates.

VERY SCARCE. One of the most significant contributions to American mineralogy and the science as a whole was made when Dana, at the youthful age of 24 published his *System of Mineralogy*. Benjamin Silliman reviewing the work, wrote: "On the whole, we believe this to be decidedly among the best treatises upon this subject that have ever been circulated in the United States, and we are of the opinion that even a slight examination of it, will be sufficient to commend it to the favor of every cultivator and lover of mineralogy." The text is a very complete and readable compendium of all mineralogical data available to that time. Thus this book is a fitting first entry into an extraordinary publishing history that would see the *System's* fourth edition define modern systematic mineralogy and see the *System's* sixth edition become arguably the greatest mineralogy ever published as a single volume.

The body of the text is divided into six distinct parts. Part I, titled "Crystallography" treats all manner of crystallographic subjects including primitive forms, systems of crystallization, nomenclature, and notation for lettering crystal drawings. A section on the theoretical aspects of crystals begins with a brief history of the science, after which Dana unfolds his own original views about the internal structure of crystals. A brief chapter on the practical aspects of "Crystallogeny" concludes this section. Part II, treats the physical characters of minerals. These include light, electricity, magnetism, specific gravity, hardness, type of fracture, color, and odor. Part III, which purportedly covers the chemical properties of minerals in essence only contains directions for the use of acids and the application of the blowpipe. In 1837, with a flood of data becoming available about the chemistry of minerals, it is surprising that more is not written about that topic in this work. Part IV treats the classification and nomenclature of minerals. Within this exposition are discussed the relative importance of crystallographic, physical and chemical properties in identifying a mineral species. Dana also discusses in detail the classes and orders of his natural classification, for which genera and species are described in the sixth section. Part V, "Determinative Mineralogy" contains two tabular classifications the objective of which is to enable the unaided student to arrive at the correct name of a mineral. The first table is arranged according to the system of crystallization as described in part I. The second table, independent of crystallographic data, distributes the minerals according to metallic or nonmetallic luster and their colored or uncolored streak. The species in these subdivisions are then arranged in the order of their hardness.

The largest portion of the book is devoted to part VI, "Descriptive Mineralogy." This portion relies very heavily upon the system and information contained in FREDRICH MOHS *Grundriß der Mineralogie* (2 vols., Dresden, 1822-24; English transl., 3 vols., Edinburgh, 1825). It begins with a tabular view of the natural classification that lists the mineral species under the appropriate class and order. Next comes the detailed description of the species, with information on synonyms, nomenclature, crystallization, localities with particular attention paid to American occurrences, and references to the mineralogical literature. Appendix A titled "Mathematical Crystallography" begins with the basics of geometry and relates this study of points, lines and planes to its practical application in crystallography. Appendix B gives brief remarks on the chemical classification of minerals. An important though error riddled mineralogical bibliography follows the appendices. A good general index and an errata page conclude the work. Through out the book and on four copper plates are figured over 250 woodcut crystal figures.

REFERENCES: *American Journal of Science*: 1st Series, 46 (1844), 362-87 [review by B. Silliman, Sr.]. • Dana's 7th (Bibliography): 69. • *Freilich Sale Catalog*: no. 147. •

Hazen & Hazen, *American Geological Literature*, 1980: no. 2798. • Hoover Collection: no. 247. • NUC: 132, 180-90 [ND 0024180]. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

1274. 2nd edition, 1844: A | System | Of | Mineralogy, | Comprising The | Most Recent Discoveries: | With Numerous Wood Cuts And Four Copper Plates. | By James D. Dana, A.M. | [rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [rule] | Second Edition. | New York And London: | Published By Wiley & Putnam. | [rule] | 1844.

8° in 4s: [1]-80⁴; 320ℓ.; [1]-633, [1] blank, [1] errata, [1] blank p., index, biblio., 4 plates (2 folding). PAGE SIZE: 222 x 138 mm.

CONTENTS: [1-2], Half title page, verso blank.; [3-4], Title page, verso "Entered | according to Act of Congress, in the year 1844, by | ..."; [5], Dedication to Benjamin Silliman.; [6], Blank.; [7]-10, "Preface."—dated March 1844.; [11]-14, Contents.; [15], "Abbreviations In Names Of Authors."; [16], Blank.; [17]-20, "Introduction."; [21]-101, "Mineralogy. | [ornate rule] | Part I. | Crystalloglogy, or The Science Of The Structure Of Minerals."; [102]-117, "Part II. | Physical Properties Of Minerals."; [118]-136, "Part III. | Chemical Properties Of Minerals."; [137]-188, "Part V. | Determinative Mineralogy."; [189]-534, "Part VI. | Descriptive Mineralogy."; [535]-548, "Catalogue | Of | American Localities Of Minerals."; [549]-576, "Part VII. | Chemical Classification."; [577]-593, "Part VIII. | Rocks Or Mineral Aggregates."; [594]-616, "Part IX. | Mineralogical Bibliography."; [617]-618, "Addenda."; [619]-633, "Index."; [1 pg], Blank.; In a very few, rare copies there is in this position the 80 page appendix (see commentary for details) [1]-80, "Appendix A. | Mathematical Crystallography."; [1 pg], "Errata."; [1 pg], Blank.; [At end], Four plates.

VERY SCARCE. The *System's* first edition of 1837 had sold out by 1842. A new edition had to be prepared and for this Dana retained the original format and updated the text with the latest discoveries. This increased the size of the work only slightly. The long appendix on "Mathematical Crystallography" was dropped in most copies. However, the most important change was in the appendix dealing with chemical classification. It has been increased from 6 to 23 pages and it now includes a chemical formula for each species. Strangely, chemistry is omitted from the descriptive part. Also introduced in the second edition and a part of all subsequent nineteenth century editions was a "Catalogue of American Localities of Minerals." The first one ran to 13 pages and included localities in 25 states.

This edition was published by Wiley and Putnam as the "Second Edition" in 1844. A note in the preface to the fifth edition of Dana's *System* (New York, 1868) says it: "This edition, failing to find a publisher in New York, was printed at the expense of the author." However, this appears to have been a misstatement. In the early 1840s, Dana was not in a position to finance the publication of the second edition. Instead, Dana might have misremembered the circumstances. He did finance the reprinting of an 80 page mathematical appendix that had appeared in the 1837 edition, and had it bound up in a very few copies of the second edition of the *System*. Mention of this is made in the *American Journal of Science* review: "The mathematical appendix of the first edition is omitted in most of the present one; only a few are bound up with it for the satisfaction of those who wish to pursue that portion of the subject." The expanded work is otherwise identical to the more common issue, which is described above.

REFERENCES: *American Journal of Science*: 2nd Series, ??, ?? [review]. • Dana's 7th (Bibliography): 69. • NUC: 132, 180-90. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

1275. 3rd edition, 1850: A | System | Of | Mineralogy, | Comprising The | Most Recent Discoveries: | Including | Full Descriptions Of Species And Their

Localities, Chemical Analyses | And Formulas, Tables For The Determination Of Minerals, | And A Treatise On Mathematical Crystallography | And The Drawing Of Figures Of Crystals. | Illustrated By Numerous Wood Cuts And Four Copper Plates. | By James D. Dana, A.M. | [...2 lines of titles and memberships...] | [ornate rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [ornate rule] | Third Edition, | Rewritten, Rearranged, And Enlarged. | New York and London: | Published by George P. Putnam. | [rule] | 1850.

4°: [1]-711, [1] p., 4 plates, illus.

SCARCE. This, the third edition of the *System*, is a transitional work, clearly marking the end to the eighteenth century ideas that relied on a "natural history" method to organize mineral species, and bringing to light the use of chemistry in a modern classification scheme. Not beating around the bush, Dana announced this break in his preface: "To change is always seeming fickleness. But not to change with the advance of the science, is worse; it is persistence in error; and therefore, notwithstanding the former adoption of what has been called the "Natural History System," and the pledge to its support given by the author, in supplying it with a Latin Nomenclature, the whole system, its classes, orders, genera, and Latin names, have been rejected; and even the trace of it, which the synonymy might perhaps rightly bear, has been discarded."

This cleared the slate for another classification, which would rely heavily on a mineral's chemistry for ordering the species. Dana was well aware of the difficulties this approach would involve in the middle of the nineteenth century, but he also realized that a better correlation of chemistry and crystallography soon would be possible. Therefore, he offered his new classification "simply as a convenient arrangement."

In accord with this fundamental revision, Dana made many other changes. Chemical formulas, derived principally from the work of Rammelsberg, were included in each of the species descriptions. The crystallization descriptions based on Haiüy were removed, although the Naumann indices remained, as did the stated crystal system. The extensive mineralogical bibliographies found in the first and second editions was replaced by a short list of major works in the subject. But some references to the original literature was still included in the species descriptions. Reading the text, it is clear that Dana had not yet settled in his own mind all the points of this new method, but the basic foundation was laid in this work.

Supplements: Published in the *American Journal of Science*, 2nd Series were separate "Mineralogical Notices" that supplemented the text of the third edition. The following list provides details.

11 (1851), pp. 225-234

12 (1852), pp. 205-222 & pp. 387-397

15 (1853), pp. 430-449

REFERENCES: Dana's 7th (Bibliography): 69. • NUC: 132, 180-90. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

1276. 4th edition, 1854: A | System | Of | Mineralogy | Comprising The | Most Recent Discoveries: | Including | Full Descriptions Of Species And Their Localities, Chemical Analyses | And Formulas, Tables For The Determination Of Minerals, | With A Treatise On Mathematical Crystallography | And The Drawing Of Figures Of Crystals. | Illustrated By Numerous Wood Cuts. | By James D. Dana, A.M. | [...3 lines of titles and memberships...] | [ornate rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [ornate rule] | Fourth Edition, | Rewritten, Rearranged, And Enlarged. | Volume I. [-II.] New York: | D. Appleton & Co., 346 & 348 Broadway. | London: 16 Little Britain. | 1854.

2 vols. [vol 1] 4°: [1]-320 p., illus. [vol 2] [1]-533, [1] errata p., illus.

CONTENTS: [Vol 1] [1-2], Half title page, verso blank.; [3-4], Title page, verso "Thomas J. Stafford, Printer.";

[5]-8, "Preface."; [9]-12, "Table Of Contents."; [13]-16, "Abbreviations."; [17]-20, "Introduction."; [21]-161, "... Crystallog. ..."; [162]-183, "Part II. | Physical Properties Of Minerals."; 183-240, "Part III. | Chemical Mineralogy."; 241-255, "Part IV. | Taxonomy."; [256]-320, "Part V. | Determinative Mineralogy."

[Vol 2] [1-2], Title page, verso "Thomas J. Stafford, Printer."; [3]-6, "Introductory Remarks."; [7]-516, "Part VI. | Descriptive Mineralogy."; [517]-533, "General Index."; [1 pg], "Errata And Addenda."

SCARCE. Four years after the appearance of the prior edition, the fourth edition of the *System* was published. In it, Dana introduces the classification of minerals which in its major divisions is followed to this day, and is commemorated with the description, "Dana Classification." It is based upon a combination of chemical and crystallographic information, with the major divisions of species determined by their chemistry, while ordering within these divisions is determined either by isomorphism or similarity of chemical formula or both.

As a necessary component of this system, the crystallographic descriptions have been overhauled. Although Naumann indices for crystal forms were mentioned in the previous editions, the method of designating forms by indices was not employed in the mineral descriptions. In this edition for the first time, Dana has included extensive information on the forms of crystals. For species rich in crystal forms, a diagrammatic summary of the observed forms is provided.

Also included in the descriptions were extensive chemical information. Much of this data was based upon the studies of Rammelsberg's *Handwörterbuch des chemischen Theils der Mineralogie* (Berlin, 1841; 5 supplements, 1843-1851), but, the chemical studies of Dana, Genth, and Shepard can also be found in the mineral descriptions.

Other issues: The work was reissued in 1855 and 1858 with no changes to the text.

Supplements: There appeared in the *American Journal of Science, 2nd Series* a series of supplements to augment the fourth edition's text. So far as is known, they were never published separately. The following list provides details.

19 (1855), pp. 353-371

21 (1856), pp. 192-213

22 (1856), pp. 246-263

24 (1857), pp. 107-132

25 (1858), pp. 396-416

26 (1858), pp. 345-364

28 (1859), pp. 128-144

REFERENCES: Dana's 7th (Bibliography): 69. • NUC: 132, 180-90. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

1277. 5th edition, 1868: A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia novisum peregrinantur....rusticantur." | [rule] | Fifth Edition. | Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. | New York: | John Wiley & Son, Publishers, | No. 2 Clinton Place. | 1868.

8°: [A]-C⁸ [1]-51⁸ 52⁶; 438^ℓ.; [i]-xlvi, [1]-827, [1] p., 617 text illus., index, biblio. PAGE SIZE: 232 x 143 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Preface"—signed James D. Dana, 30 April 1868.; vi-viii, Prefaces from previous editions.; [ix]-x, "Table Of Contents."; [xi]-xlvi, "Introduction."; [1]-764, Text.; 765-791, "Catalogue Of American Localities Of | Minerals."; [792], Blank.; 793-806, "Supplement."; [807]-827, "Index."; [1 pg], Blank.

SCARCE. Assisted by GEORGE JARVIS BRUSH with regards to the blow pipe characteristics, the fifth edition of the *System* has a form that is familiar to present day

mineralogists. The previous editions had included an extensive introduction describing the various phases of mineralogical and crystallographic science in addition to the descriptive mineralogy. In the fifth edition all but the descriptive part was dropped and this was provided with only a short introduction designed to aid the descriptive part. This had now grown to 805 pages, three times the length of the first edition published only 31 years earlier.

In addition to fundamentally changing the character of the work, many improvements were made in the mineral descriptions. The number of references to the original literature was greatly increased, while the bibliography in the introduction was enlarged. For the first time, optical data was included in the mineral descriptions, but was limited to statements of orientation, optic sign and birefringence, but no indices of refraction were given.

The publication of the fifth edition marked the end of James Dana's active connection with the *System*. The first appendix was brought out in 1872 by Brush. It covered the progress of mineralogy from 1868 to 1872, but was not considered to be up to the standard set by the text of the fifth edition. Dana's son, Edward took over the management of the remaining appendices, and the *System* as a whole in 1875.

Other issues: The fifth edition of the *System* was reissued more than a dozen times. In fact, the appearance of the three separate appendices allowed the publisher to bind them with the text and reissue the combined work with an updated title page. This update usually consisted of placing the term "Sub-Edition" on the title, but with the pending publication of the sixth edition of the *System* in 1892, "Fifth Edition" was replaced with ever higher numbering in an effort to entice customers to purchase the remaining stock of what would soon be an obsolete text. The following list indicates the year of issue and the sub-edition number if any.

1869

1870

1872

1874, 5th sub-edition, with 1 appendix.

1875, 6th sub-edition, with 1 appendix.

1877, 7th sub-edition, with 2 appendices.

1880, 8th sub-edition, with 2 appendices.

1882, 9th sub-edition, with 2 appendices.

1883, 10th sub-edition, with 3 appendices.

1885, 11th sub-edition, with 3 appendices, also called the 7th edition on the title page.

1888, 11th sub-edition, with 3 appendices, also called the 8th edition on the title page.

1889, 11th sub-edition, with 3 appendices, also called the 9th edition on the title page.

1890, 11th sub-edition, with 3 appendices, also called the 11th edition on the title page.

REFERENCES: Dana's 7th (Bibliography): 69. • NUC: 132, 180-90. • Pabst, A., "Dana's system of mineralogy," *Rocks & Minerals*, 19 (1944), no. 12, 379-87.

Appendices

First Appendix To The Fifth Edition Of Dana's Mineralogy, by George J. Brush ... Completing The Work To 1872. (New York, 1872).

See: Brush, George Jarvis.

Second Appendix To The Fifth Edition Of Dana's Mineralogy, By Edward S. Dana, ... Completing the Work to 1875. (New York, 1875).

See: Dana, Edward Salisbury.

Third Appendix To The Fifth Edition Of Dana's Mineralogy, By Edward S. Dana ... Completing The Work To 1882. (New York, 1882).

See: Dana, Edward Salisbury.

Sixth Edition

The System of Mineralogy of James Dwight Dana 1837—1868 by Edward S. Dana ... Sixth Edition. (New York, 1892).

See: Dana, Edward Salisbury.

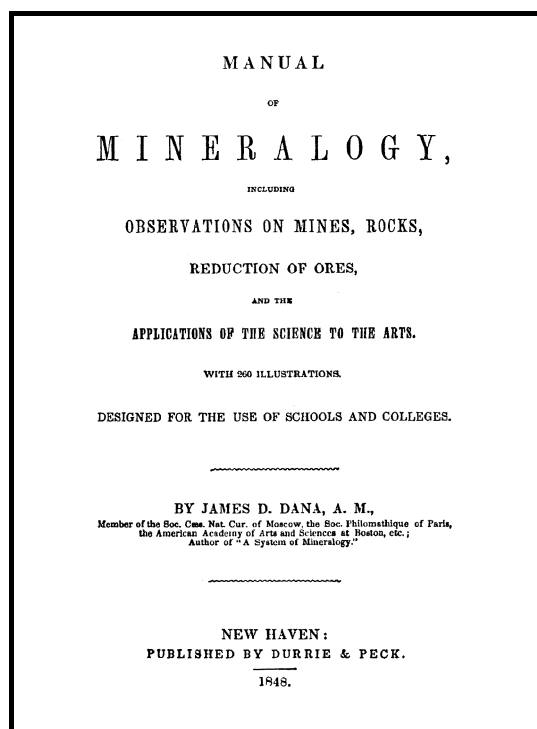
1278. — English, 1842.

The Natural Classification of Minerals, reprinted from Dana's Mineralogy, and designed to answer the purpose of Labels for Cabinets. Published at Neely's Schoolbook Warehouse, and Mineralogical Depot, 221 Bleeker – Street, New York, 1842.

8°: 58ℓ. PAGE SIZE: 165 x 95 mm.

VERY RARE. Another of those curious works designed to be destroyed by the purchaser in labeling his mineral collection. It lists by number Dana's mineral species, following the natural history classification and nomenclature utilized in the first edition of his *System of Mineralogy* (New Haven, 1837). For each mineral the class, order, genus, and species are given in Latin. The text is printed on only one side of the paper and is widely separated vertically to allow buyers of the book to clip out the separate entries as labels for their specimens.

REFERENCES: NUC: [no copy listed]. • Peri Lithon, Bookseller: cat. 5 (1972), no. 114.



MANUAL OF MINERALOGY, 1848

Manual of Mineralogy

1279. — English, 1848 [First edition].

Manual | Of | Mineralogy, | including | Observations On Mines, Rocks, | Reduction Of Ores, | and the | Applications Of The Science To The Arts. | With 260 Illustrations. | Designed For The Use Of Schools And Colleges. | [ornate rule] | By James D. Dana, A.M., | [...3 lines of titles and memberships...] | [ornate rule] | New Haven: | Published By Durrie & Peck. | [rule] | 1848.

12°: [i]-xii, 13-430 p., 260 illus., diagrs.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1848, by | Durrie & Peck | ..."; [iii]-iv, "Preface."; [v]-vi, "Table Of Contents."; [vii]-xii, "Glossary & Index Of Terms."; [13]-387, Text.; [388]-414, Tables for the determination of minerals.; [415]-430, "Index."

VERY SCARCE. This volume was designed as a textbook for practical mineralogy, aimed especially at American students. Its first pages treat the mineralogical science with regard to physical and chemical characters. Following this are the descriptions of the mineral species. All American minerals and other species considered important are described, while rarer species are set in smaller type and only briefly noticed. The arrangement adopted, places the ores of the same metal together. The descriptions of the ores of a metal are preceded by a paragraph giving brief general remarks about their characteristics. Information is provided about assay and reduction, the uses of the metal, and facts of a historical and statistical nature. At the end of the text are chapters on rocks, a catalogue of American localities of minerals, a table of weights, measures and coins, and a table for the determination of minerals. For more detailed information on the localities of minerals and their associations, the reader is directed to the author's comprehensive, *System of Mineralogy* (2nd ed., New York, 1844), which contains full lists of synonyms, complete tables for the determination of minerals, a more complete crystallography, and numerous chemical analyses with their authorities.

Of particular interest in this volume is the classification scheme. The first and second edition of Dana's *System of Mineralogy* (1837 & 1844) had used a natural history method, yet the classification adopted in the *Manual* "throws together ores of the same metals, and associates the earthy species as far as possible in natural groups." Dana writes that he chose this method because "this order is preferred by very many teachers of science, and has advantages which for many purposes counterbalance those of a more perfectly natural system." It is here in the *Manual* then that Dana first breaks away from the prevailing natural history classification systems of mineralogy and begins to develop a chemically based one. Dana would switch to a system based solely on chemistry in the fourth edition of his *System* (New York, 1854), and rewrite mineral classification to the present time.

Other issues: The discovery of gold in California in 1849 caused the *Manual* to be in great demand. Many a

"forty-niner" carried a copy of Dana's *Manual* in their trek to the California and Colorado gold fields. Subsequently, many reissues of the work appeared. The first was in 1849, which although the title page calls it a "Second edition," it is in fact a reissue of the first edition with the same pagination as the first. These reissues with modified title pages (title editions) also occurred in 1850 ("Third edition"), 1851 ("Fourth edition"), 1853 ("Fifth edition"), 1854 ("Sixth edition"), and 1855 ("Seventh edition").

REFERENCES: *American Journal of Science*: 2nd Series, 6 (1848), 302 [review]. • NUC: 132, 180-90 [ND 0024070].

1280. 2nd Text Revision, 1857: Manual | of | Mineralogy, | including | Observations on Mines, Rocks, | Reduction of Ores, | and the | Applications of the Science to the Arts, | with 260 Illustrations. | Designed for the Use of Schools and Colleges. | [wavy rule] | By James D. Dana, A.M., | [...3 lines of titles and memberships...] | New Edition, Revised and Enlarged. | New Haven: | Published by Durrie & Peck. | Philadelphia: Peck & Bliss. | [rule] | 1857.

8°: [i]-xii, [13]-454, [2] p., illus., diagrs., index.

CONTENTS: [i-ii], Title page, verso "Entered according to Act of Congress, in the year 1857, ..."; [iii]-iv, Preface to the first and second editions; [v]-vi, "Table Of Contents."; [vii]-xii, "Glossary And Index Of Terms."; [1]-413, Text.; [414]-440, "Tables for the Determination of | Minerals."; [441]-454, [2], "Index."

SCARCE. Due to the great demand for the book, Dana prepared a "New Edition, Revised and Enlarged" that first appeared in 1857. The text was increased by 22 pages mostly dealing with minerals of economic importance, but especially gold and its mineral associations. This "New Edition", which became a standard in schools in The United States, was then reissued with little or no alteration to the text each year from 1858 until 1876.

REFERENCES: NUC: 132, 180-90.

1281. 3rd Text Revision, 1878: Manual of mineralogy and lithology containing the elements of the science of minerals and rocks. For the use of the practical mineralogist and geologist, and for instruction in schools and colleges. By James D. Dana. Third edition, rearranged and rewritten. New York, J. Wiley & Sons, 1878.

8°: viii, 474 p., illus., diagrs.

SCARCE. This is the third major revision of the basic book that Dana made. The book declares this on the title page with "Rearranged and Rewritten" and correctly calls it the "Third edition." Included was an extensive chapter on rocks (showing the rise in the science of petrology), and the title was changed to *Manual of Mineralogy and Lithology*. As before, the work became popular in classrooms throughout the United States and consequently the book was reissued each year from 1879 through 1886, with varying "Editions" mentioned on the title page.

REFERENCES: NUC: 132, 180-90.

1282. 4th Text Revision, 1887: Manual of mineralogy and petrography; containing the elements of science of minerals and rocks. For the use of the practical mineralogist and geologist and for instruction in schools and colleges. By James D. Dana. Fourth edition, revised throughout and enlarged. New York, J. Wiley & Sons, 1887.

8°: [i]-ix, [1], [1]-517, [1] p., illus., diagrs.

CONTENTS: [i-ii], Title page, verso copyright information.; [iii], "Preface."; [iv], Blank.; [v]-ix, "Table of Contents."; [1 pg], Blank.; [1]-3, "General Remarks."; 4-66, "I. Crystallization of Minerals: Crystallography."; 66-85, "II. Physical Properties of Minerals."; 86-102, "III. Chemical Properties of Minerals."; 103-404, "IV. Descriptions of Minerals."; 405-433, "V. Determination of Minerals."; [434]-495, "On Rocks.—Petrology."; 495-496, "Academy Mineral Collection."; 497-517, "General Index."; [1 pg], Blank.

SCARCE. In 1887, Dana made his fourth thorough revision of the text bringing it current to 1886, which was

reflected with the book being called the "Fourth Edition, Revised throughout and Enlarged." As with the other editions, this volume was aimed toward the needs of miners and practical mineralogists by placing together the ores of the same metal. Reissues of this text with varying edition information printed on the title pages occurred in 1887 ("Fifth edition"), 1888 ("Sixth edition"), 1889 ("Seventh edition"), 1890 ("Ninth edition"), 1891 ("10th ed."), 1891 ("11th ed."), and 1894-1909 ("12th ed.").

REFERENCES: *American Journal of Science*: 3rd series, 33 (1887), 243 [review]. • NUC: 132, 180-90.

Dana's Manual of Mineralogy ... (New York & London, 1912).

See: Ford, William Ebenezer.

Rudimentary Treatise on Mineralogy. Third edition, to which is added, A Treatise on Rocks and Mineral Aggregates, by James D. Dana. (London, 1856).

See: Varley, Delvalle.

Rudimentary Treatise on Mineralogy. Fourth edition, to which is added, A Treatise on Rocks and Mineral Aggregates, by James D. Dana. (London, 1859).

See: Varley, Delvalle.

A Text-Book of Mineralogy. With an Extended Treatise on Crystallography and Physical Mineralogy. By Edward Salisbury Dana ... On the Plan and with the Co-Operation of Professor James D. Dana. (New York, 1877).

See: Dana, Edward Salisbury.

1283. — English, 1844 [2nd edition, issue B].

A | System | Of | Mineralogy, | Comprising The | Most Recent Discoveries: | With Numerous Wood Cuts And Four Copper Plates. | By James D. Dana, A.M. | [rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [rule] | Second Edition. | New York And London: | Published By Wiley & Putnam. | [rule] | 1844.

8° in 4s: [1]-633, [1] blank, [1]-80, [1] errata, [1] blank p., index, biblio., 4 plates (2 folding). PAGE SIZE: 222 x 138 mm.

CONTENTS: [1-2], Half title page, "????", verso blank.; [3-4], Title page, verso "Entered | according to Act of Congress, in the year 1844, by | ..."; [5], Dedication to Benjamin Silliman.; [6], Blank.; [7]-10, "Preface."—dated March 1844.; [11]-14, Contents.; [15], "Abbreviations In Names Of Authors."; [16], Blank.; [17]-20, "Introduction."; [21]-101, "Mineralogy. | [ornate rule] | Part I. | Crystallology, or The Science Of The Structure Of Minerals."; [102]-117, "Part II. | Physical Properties Of Minerals."; [118]-136, "Part III. | Chemical Properties Of Minerals."; [137]-188, "Part V. | Determinative Mineralogy."; [189]-534, "Part VI. | Descriptive Mineralogy."; [535]-548, "Catalogue | Of | American Localities Of Minerals."; [549]-576, "Part VII. | Chemical Classification."; [577]-593, "Part VIII. | Rocks Or Mineral Aggregates."; [594]-616, "Part IX. | Mineralogical Bibliography."; [617]-618, "Addenda."; [619]-633, "Index."; [1 page], Blank.; [1]-80, "Appendix A. | Mathematical Crystallography."; [1 page], "Errata."; [1 page], Blank.; [At end], Four plates.

VERY SCARCE. This is the rare second issue, where the 80 page mathematical appendix that was issued with the first edition of 1837 has been bound up with the text of this edition. Mention of this is made in the AJS review: "The mathematical appendix of the first edition is omitted in most of the present one; only a few are bound up with it for the satisfaction of those who wish to pursue that portion of the subject." The work

is otherwise identical to the more common issue, which for a description see the above item.

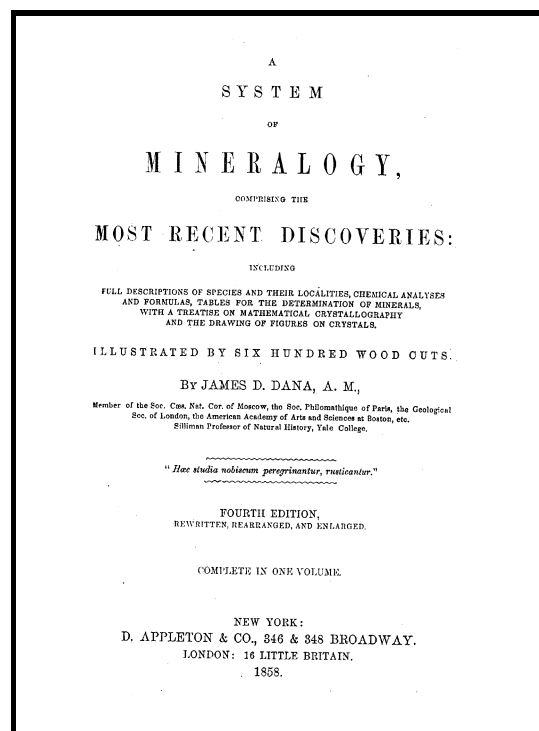
REFERENCES: Dana's 7th (Bibliography): 69.

1284. — English, 1855 [4th edition, issue B].

A | System | Of | Mineralogy | Comprising The | Most Recent Discoveries: | Including | Full Descriptions Of Species And Their Localities, Chemical Analyses | And Formulas, Tables For The Determination Of Minerals, | With A Treatise On Mathematical Crystallography | And The Drawing Of Figures Of Crystals. | Illustrated By Numerous Wood Cuts. | By James D. Dana, A.M. | [...3 lines of titles and memberships...] | [ornate rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [ornate rule] | Fourth Edition, | Rewritten, Rearranged, And Enlarged. | Volume I. [-II.] | London: | Trübner & Co., 12, Paternoster Row. | 1855.

[Vol 1] 4°: [1]-320 p.; [Vol 2] [1]-533, [1] errata & addenda p. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.



SYSTEM OF MINERALOGY, 1858

1285. — English, 1858 [4th edition, issue C].

A | System | Of | Mineralogy | Comprising The | Most Recent Discoveries: | Including | Full Descriptions Of Species And Their Localities, Chemical Analyses | And Formulas, Tables For

The Determination Of Minerals, | With A Treatise On Mathematical Crystallography | And The Drawing Of Figures Of Crystals. | Illustrated By Six Hundred Wood Cuts. | By James D. Dana, A.M. | [...3 lines of titles and memberships...] | [ornate rule] | "Hæc studia nobiscum peregrinantur, rusticantur." | [ornate rule] | Fourth Edition, | Rewritten, Rearranged, And Enlarged. | Complete In One Volume. | New York: | D. Appleton & Co., 346 & 348 Broadway. | London: 16 Little Britain. | 1858.

8°: VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1286. — English, 1869 [5th edition, issue B].

A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia noviscum peregrinantur....rusticantur." | [rule] | Fifth Edition. | Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. | New York: | John Wiley & Son, Publishers, | 2 Clinton Hall, Astor Place. | 1869.

4°: xlviii, 827 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1287. — English, 1870 [5th edition, issue C].

A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia noviscum peregrinantur....rusticantur." | [rule] | Fifth Edition. | Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. | New York: | John Wiley & Son, Publishers, | 2 Clinton Hall, Astor Place. | 1870.

4°: xlviii, 827 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1288. — English, 1872 [5th edition, issue D].

A System Of Mineralogy. ... Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (4th Sub-Edition, With An Appendix, Bringing The Work Down To 1872). New York: John Wiley & Son, Publishers, 1872.

4°: xlviii, 827, iv, 19 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

DANA

1289. — English, 1874 [5th edition, issue E].

A System Of Mineralogy. ... Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (5th Sub-Edition, With An Appendix.) New York: John Wiley & Son, Publishers, 1874.

4°: xlviii, 827, iv, 19 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1290. — English, 1875 [5th edition, issue F].

A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia noviscum peregrinantur....rusticantur." | [rule] | Fifth Edition, | Rewritten And Enlarged, And Illustrated With | Upwards Of Six Hundred Woodcuts. | (6th Sub-Edition, With Two Appendixes And Corrections.) | New York: | John Wiley & Son, Publishers, | 15 Astor Place. | 1875.

4°: xlviii, 827, iv, 19, x, 64 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1291. — English, 1877 [5th edition, issue G].

A System Of Mineralogy. ... Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (7th Sub-Edition, With Two Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1877.

4°: xlviii, 827, iv, 19, x, 64 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1292. — English, 1880 [5th edition, issue H].

A System Of Mineralogy. ... Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (8th Sub-Edition, With Two Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1880.

4°: xlviii, 827, iv, 19, x, 64 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

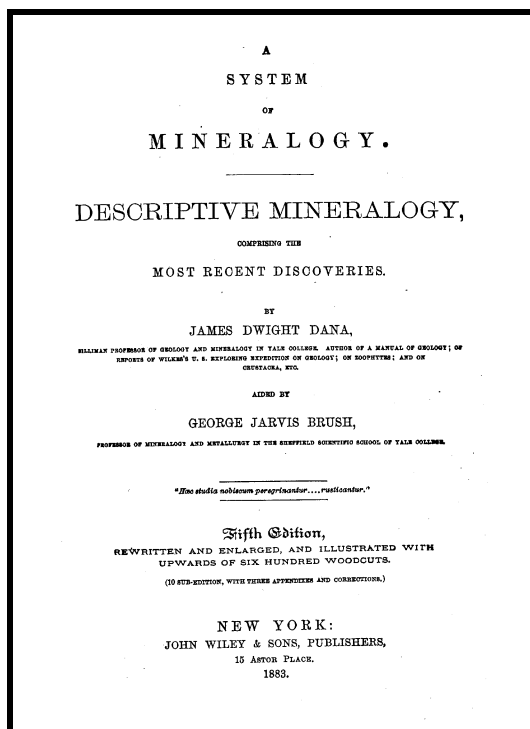
1293. — English, 1882 [5th edition, issue I].

A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia noviscum peregrinantur....rusticantur." | [rule] | Fifth Edition, | Rewritten And Enlarged, And Illustrated With | Upwards Of Six Hundred Woodcuts. | (9th Sub-Edition, With Two

Appendixes And Corrections.) | New York: | John Wiley & Son, Publishers, | 15 Astor Place. | 1882.

4°: xlviii, 827, iv, 19, x, 64 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.



SYSTEM OF MINERALOGY, 1883

1294. — English, 1883 [5th edition, issue J].

A System Of Mineralogy. ... Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (10th Sub-Edition, With Three Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1883.

4°: xlviii, 827, iv, 19, x, 64, xiii, 134 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1295. — English, 1885 [5th edition, issue K].

A System Of Mineralogy. ... Seventh [!] Edition, Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (11th Sub-Edition, With Three Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1885.

4°: xlviii, 827, iv, 19, x, 64, xiii, 134 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1296. — English, 1888 [5th edition, issue L].

A System Of Mineralogy. ... Eighth [!] Edition, Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (11th Sub-Edition, With Three Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1888.

4°: xlviii, 827, iv, 19, x, 64, xiii, 134 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1297. — English, 1889 [5th edition, issue M].

A | System | Of | Mineralogy. | [rule] | Descriptive Mineralogy, | Comprising The | Most Recent Discoveries. | By | James Dwight Dana, | [...3 lines of titles and memberships...] | Aided By | George Jarvis Brush, | Professor Of Mineralogy And Metallurgy In The Sheffield Scientific School Of Yale College. | [rule] | "Hæc studia noviscum peregrinantur....rusticantur." | [rule] | Ninth [!] Edition, | Rewritten And Enlarged, And Illustrated With | Upwards Of Six Hundred Woodcuts. | (11th Sub-Edition, With Two Appendixes And Corrections.) | New York: | John Wiley & Son, Publishers, | 15 Astor Place. | 1889.

4°: xlviii, 827, iv, 19, x, 64 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

1298. — English, 1890 [5th edition, issue N].

A System Of Mineralogy. ... Eleventh [!] Edition, Rewritten And Enlarged, And Illustrated With Upwards Of Six Hundred Woodcuts. (11th Sub-Edition, With Three Appendixes And Corrections.) New York: John Wiley & Son, Publishers, 1890.

4°: xlviii, 827, iv, 19, x, 64, xiii, 134 p., illus. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 69.

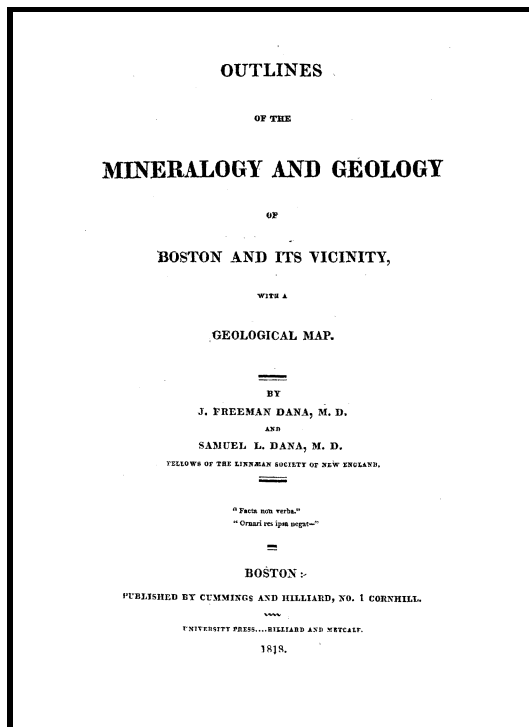
DANA, James Freeman. (BORN: Amherst, New Hampshire, U.S.A., 23 September 1793; DIED: New York, New York, U.S.A., 14 April 1827) *American mineralogist & chemist.*

In 1809, when Dana entered Harvard, he was particularly interested in natural history and already advanced in his chemical studies. During his student years and after his graduation in 1813, he was regarded as a superlative chemist and mineralogist. Consequently, Dana was regularly asked to analyze minerals and devise particular tests. In 1815 he received the Boylston prize for an essay on tests for arsenic. In 1815, Harvard sent Dana to England as a purchasing agent for chemical apparatus. While there, he studied for several months under FREDRICH ACCUM. Returning in 1816, he was appointed to supervise the renovation of Harvard's laboratory. In 1817, Dana completed advanced studies and received an M.D. from Harvard. Subsequently, he was hired by Harvard as an instructor. In 1826, Dana moved to New York to become professor of chemistry at the College of Physicians and Surgeons. He died suddenly at the early age of 33.



J.F. DANA

REFERENCES: ABA: I 396, 239-252, 288-293. • Adams, *Dictionary of American Authors*, 1904. • *American Chemists & Chemical Engineers*: 1, 109 [by W.D. Miles]. • *Appleton Cyclopedia of American Biography*. • BBA: I 301, 250. • DAB: 5, 56. • Drake, *Dictionary of American Biography*, 1872. • Elliott, *Biographical Dictionary*, 1979: 71-2. • Fruton, *Bio-Bibliography*, 1982: 152 [other refs.]. • *Herringshaw's National Library of American Biography*. • *National Cyclopedia of American Biography*. • Poggendorff: 1, col. 516 & col. 1553. • Sarjeant, *Geologists*, 1980: 2, 812. • WBI.



OUTLINES OF THE MINERALOGY, 1818

DAUBENTON

1299. — English, 1818.

Outlines | of the | Mineralogy And Geology | of | Boston And Its Vicinity, | with a | Geological Map. | [double rule] | By | J. Freeman Dana, M.D. | and | Samuel L. Dana, M.D. | Fellows Of The Linnæan Society Of New England. | [double rule] | “Facta non verba.” | “Ornari res ipsa negta-” | [double rule] | Boston: | Published By Cummings And Hilliard, No. 1 Cornhill. | [ornate rule] | University Press ... Hilliard and Metcalf. | 1818.

4°: π^6 3-144; 54ℓ.; [1]-108 p., folding hand-colored map. PAGE SIZE: 262 x 154 mm. uncut.

CONTENTS: [Facing the title page is a hand-colored, folding map, 340 x 390mm., titled: “A | Geological Map | of | Boston | and its | Vicinity | Engraved for Danas’ Outlines of the | Mineralogy and Geology of Boston,” by Annin & Smith.; [1-2], Title page, verso “District Of Massachusetts, To Wit: | ...”; [3]-5, “Preliminary Observations.”—signed J.F.D. [James Freeman Dana] and S.L.D. [Samuel Luther Dana], 10 August 1818.; [6], Blank.; [7], “A List of the Authors and Editions of the Works consulted in preparing | the following pages.”; [8], Blank.; [9]-19, “Tabular View | of the minerals described in the work.”; [20]-75, Descriptive mineralogy.; [76], Blank.; [77], “Geology | Of | Boston And Its Vicinity.”; [78]-97, Description of various rock types found.; [98]-105, “Description Of The Map.”; [106]-108, “A Short Vocabulary | Of | Mineralogical Terms.”

VERY SCARCE. Co-authored with Samuel Luther Dana [see note below], this early American topographical mineralogy is a reset, reissue of a work that first appeared in *Memoires of the American Academy of Arts and Sciences, Boston* (see, 4 1818, 129-224). The Danas provide in this work a detailed and comprehensive introduction to the geology and mineralogy of the Boston area. The authors describe their reasons for writing the book thusly: “It is a common remark, that the vicinity of Boston is no field for the mineralogist. To this opinion we must ascribe the coldness and indifference, with which mineralogy is here treated. On great object which we have had in view, in preparing the following work, has been, to induce an examination of this opinion. It will be found, that more than forty simple minerals, and several rocks occur within a few miles of Boston; and that, if we cannot boast the fertility and variety of mining districts, we may reap a richer harvest, than can be gathered in many portions of our country.”

The Danas’ account of the mineralogy and geology of Boston and vicinity grouped the minerals into four classes: earthy fossils, saline fossils, inflammable substances and metallic fossils. Among the species identified were lime, quartz, mica, feldspar, basalt, garnet, epidote, asbestos, chlorite, clay, and ores of copper, lead, iron, manganese. Each mineral is given a concise description and locality. Although it is clear from the text that the Danas understood the difference between rocks and minerals, they followed the practice of the time and included the rocks and soils with in the mineral classification. A section on the geology of the area, which faithfully follows Werner, has an

accompanying a remarkably accurate map of Boston and its vicinity, indicating in color the surface location of various rock types.

Samuel Luther Dana. (BORN: Amherst, New Hampshire, U.S.A., 11 July 1795; DIED: Lowell, Massachusetts, U.S.A., 11 March 1868) *American physician.* Dana was the son of a merchant and sea captain and brother of James Freeman Dana. He attended Harvard, receiving his M.D. in 1818. He opened a medical practice, but gave it up in 1826 to concentrate on the manufacture of sulphuric acid and bleaching salts. From 1830 to 1840, he was associated with the geological surveys of Massachusetts under Edward Hitchcock. Dana was considered a leading American authority on technical and agricultural chemistry.

REFERENCES: Greene & Burke, *Minerals in the Age of Jefferson*, 1978: p. 77. • NUC. (Dana) DAB: 5, 61. • Elliott, *Biographical Dictionary*, 1979: 72. • Youmans, *Pioneers of Science in America*, 1896: p. 311-8.



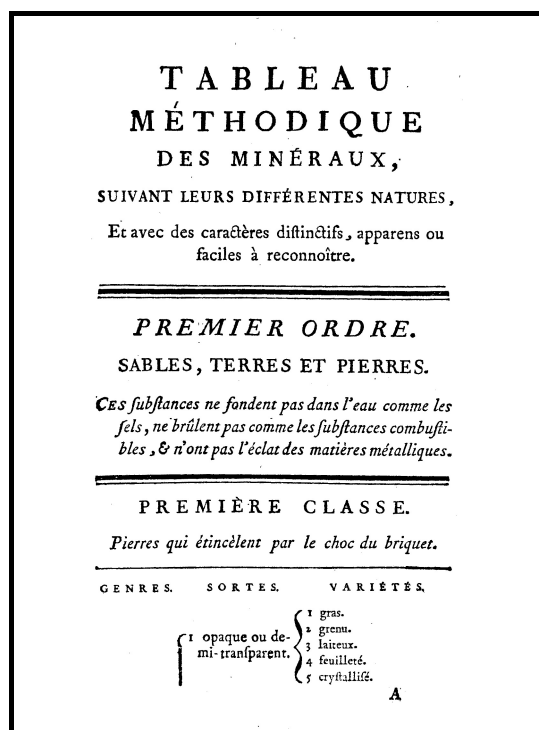
DAUBENTON

DAUBENTON, Louis-Jean-Marie. (BORN: Montbard, Côte d’Or, France, 29 May 1716; DIED: Paris, France, 1 January 1800) *French physician, anatomist & mineralogist.*

Daubenton was sent to Paris to study theology, but he preferred medicine. After receiving his M.D. in 1741, he intended to return to his birth city to open a practice; however, Buffon, a school mate from his hometown, engaged Daubenton to assist him at the Jardin du Roi in Paris and his projected scientific works. In 1745, he was appointed curator and demonstrator at the cabinet of natural history. In 1778, he was appointed to a chair in natural history at the College de France. For the fifty years he was in charge of the cabinet of natural history, he made a great many improvements. When the Jardin du Roi was converted to a school in 1794, Daubenton was appointed professor of mineralogy.

REFERENCES: ABF: I 281, 300-329; II 190, 399. • Barr, *Index to Biographical Fragments*, 1973: 63. • *Catalogue of Portraits of Naturalists*: 341 [4 portraits listed]. • DBF: 10, 243-4. • Drugulin, *Sechstausend Portraits*, 1863: no. 1226-8. • DSB: 15, 111-4 [by C. Limoges; other refs.]. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 1, 320. • Lambrecht & Quenstedt, *Catalogus*, 1938: 105. • *Nouvelle Biographie Générale* (Hoefer): 13, cols. 162-6. • NY Academy Portrait Catalog: 2 [4 portraits listed]. • Poggendorff: 1, col. 525. • Roule, L., *Daubenton et*

l'exploitation de la nature. Paris, Flammarion, 1925. [1]-246 p. [Published as: *L'Histoire de la nature vivante d'après des grands naturalistes Français*, no. 2.]. • Sarjeant, *Geologists*, 1980: 2, 851-2 & Suppl. 1 (1986), 1, 377. • Thomas, *Dictionary of Biography*, 1884: 724. • WBI. • Wellcome Catalog (History): 15, 50 [6 refs.].



TABLEAU, 1784

1300. — French, 1784 [First edition].

Tableau | Méthodique | Des Minéraux, | Suivant
Leurs Différentes Natures, | Et avec des caractères
distinctifs, apparens ou | faciles à reconnoître. |
[triple rule] | Premier Ordre. | Sables, Terres Et
Pierres. | Ces substances ne fondent pas dans
l'eau comme les | sels, ne brûlent pas comme les
substances combusti- | bles, & n'ont pas l'éclat des
matières métalliques. | ...

8°: A-D⁸ E⁴; 36ℓ.; [1]-36ℓ., printed on recto
side only. COLOPHON, leaf 35, reads: "A Paris, |
Chez Demonville, Imprimeur de l'Académie Française,
| rue Christine; Pierres, Imprimeur du Roi, rue Saint |
Jacques; Debure l'aîné; Didot le Jeune; Gogué & | Née
de la Rochelle, quai des Augustins. | [rule] | M. DCC.
LXXXIV. | Sous les Privileges de l'Académie Royale
des Sciences & du | Collège Royal de France." PAGE
SIZE: 198 x 122 mm.

CONTENTS: [ℓ. 1/=A1], Title page, verso blank.; ℓ. 2-
ℓ. 34/A2r-E2r, Text.; ℓ. 35-ℓ. 36/E3r-E4r, Colophon and
"Avertissement."

RARE. As we learn from the 'Avertissement',
these tables were exhibited in manuscript form during

Daubenton's lectures in 1779 and were printed on rectos
only so that they could be mounted on canvas. They
were used to clarify Daubenton's classification system
of minerals during his lectures at the Jardin du Roi.
It is from these tables that one learns Daubenton
divided the mineral kingdom into four orders: (1)
stones, including precious and semiprecious, (2) fossils,
(3) combustible substances, and (4) metallic substances.
Classes of species within each order are derived from the
physical and chemical properties of the minerals. As an
appendix to this system, he included a list of volcanic
products.

These tables were updated and issued through
seven editions. See their descriptions below.

REFERENCES: Beekman, *Systematische Mineralogie*,
1906: p. 57-9. • BL: [B.408.(1.)]. • CBN: [S.20447]. •
Dana's 7th (Bibliography): 69. • DSB: 15, 113. • Duveen,
Bibliotheca Alchemica et Chemica, 1965: p. 158. • *Freilich
Sale Catalog*: no. 149. • Hoover Collection: nos. 250 &
251. • LKG: XII 103. • NUC: 133, 523 [ND 0054034]. •
*Observations sur la Physique, sur l'Histoire Naturelle et sur les
Arts*: 26 (1785), 68-70 [review].

1301. 2nd edition, 1788: Tableau Méthodique des Minéraux,
suivant leurs Différentes Natures, et avec des caractères
distinctifs, apparens ou faciles à reconnoître ... Paris,
Pierres, 1788.

8°: A-D⁸ E⁴; 36ℓ.; [1]-36ℓ. VERY SCARCE.

REFERENCES: CBN: [S.20448].

1302. 3rd edition, 1792: Tableau Méthodique des Minéraux,
suivant leurs Différentes Natures, et avec des caractères
distinctifs, apparens ou faciles à reconnoître ... 3. Édition.
[Paris, de l'Imprimerie de du Pont, 1792].

8°: A-F⁸; 42ℓ. Printed on recto side only. VERY
SCARCE.

REFERENCES: BL: [F.R.451.(24.)]. • LKG: XII 103.

1303. 4th edition, 1793/4: Tableau Méthodique des Minéraux
suivant leurs Différentes Natures et avec des Caractères
Distinctifs, apparens ou Faciles à Reconnaître par Louis
Jean Marie Daubenton. 4. Édition. Paris, An II [i.e.,
1793/1794].

8°: A-F⁸; 42ℓ. Printed on recto side only. VERY
SCARCE.

REFERENCES: CBN: [S.20449].

1304. 5th edition, c1796: Tableau | Méthodique | des
Minéraux, | suivant leurs Différentes natures, | Et avec des
Caractères Distinctifs, apparens | ou faciles à reconnoître.
| Par le C. Daubenton, de l'Institut National, et | Professor
de Minéralogie au Museum d'Histoire | naturelle. | [rule]
| Cinquième Édition. | [rule] | A Paris, | De l'Imprimerie
de Du Pont. | [double rule] | l'An IV de la République.

8°: π² A-F⁸ G⁴; 54ℓ.; [2], [1]-52ℓ. Note: Leaves A1-
G4 are printed on the recto side only.

CONTENTS: [ℓ. 1rv/π1], Title page, verso blank.;
[ℓ. 2rv/π2], "Avertissement."; [1]-50/A1r-G2r, "Tableau
Méthodique des Minéraux ..."; 51-52/G3r-G4r, "Minéraux
dont on ne Connoît pas Assez la Natur pour les Classer."

RARE. This edition added mineral names based upon
the new chemical nomenclature. Four orders divide the
minerals into classes, and under each of these the species
are divided by physical and chemical properties.

REFERENCES: CBN: [S.20548]. • Cole, *Chemical
Literature*, 1988: no. 337.

1305. 6th edition, 1798-9: Tableau Méthodique des Minéraux,
suivant leurs Différentes Natures, et avec des caractères
distinctifs, apparens ou faciles à reconnoître. 6. Édition.
Paris, Huzard, An VII [1798/99].

8°: vii p., 58ℓ. VERY SCARCE.

REFERENCES: LKG: XII 103. • NUC: As an appendix
to this system, he included a listing of 133, 523 [ND
0054035]. • Roller & Goodman, *Catalogue*, 1976: 1, 294.

DAUBRÉE

1306. 7th edition, 1801: Tableaux | Méthodique | Des Minéraux, | Suivant Leurs Différentes Natures, | Et avec des caractères distinctifs, apparens | ou faciles à reconnoître. | Par Louis-Jean-Marie Daubenton, | [...4 lines of titles and memberships...] | [wavy rule] | Septième Édition. | [wavy rule] | A Paris, | Chez Villier, libraire, rue des Mathurins, n^o 396. | [rule] | An IX.—1801.

8^o: xx p., 81 (i.e., 79)ℓ. Leaves 57-58 omitted; leaves 1-56 printed on recto side only.

RARE. The seventh expanded and last edition of Daubenton's popular tables of mineralogy.

REFERENCES: BL: [T.961.(8.)]. • LKG: XII 103. • NUC: [ND 0054036].

DAUBRÉE, Gabriel-Auguste. (BORN: Metz, France, 25 June 1814; DIED: Paris, France, 29 April 1896) *French mineralogist & geologist.*

Daubrée studied at the École Polytechnique in Paris, becoming a qualified mining engineer in 1834. He was placed in charge of the mines at Bas-Rhin, Alsace in 1838. Later he was appointed professor of mineralogy and geology at the University of Strasbourg. In 1859, Daubrée became engineer of all mining operations in France. Named professor of geology at the Museum of Natural History in Paris in 1861, he also became a professor of mineralogy at the École des Mines in Paris. Daubrée was appointed the director of this institution in 1872. Recipient of many honors including the Wollaston Medal from the Geological Society of London, 1880. F.R.S., 1881. Member of the French Academy of Science to which he was elected a vice president and then president in 1878 and 1879, respectively.

REFERENCES: ABF: I 282,1-95. • Barr, *Index to Biographical Fragments*, 1973: 63. • DSB: 3, 586-7. • *Encyclopaedia Britannica*, 11th edition. • Lambrecht & Quenstedt, *Catalogus*, 1938: 105. • Poggendorff: 1, col. 526, 3, 329-30 & 4, 299. • Sarjeant, *Geologists*, 1980: 2, 852-3 & Suppl. 2 (1995), 1, 560. • WBI. • *World Who's Who in Science*: 412.

1307. — French, 1852.

Description | Géologique Et Minéralogique | Du Department | D Bas-Rhine, | Par | M.A. Daubrée, | [...2 lines of titles and memberships...] | [rule] | Publiée par décision du Conseil général du département. | [ornate rule] | Veuve Berger-Levrault Et Fils, Libraires. | [Imprint separated into 2 columns with a vertical bar between:] Paris, | Rue Des Saintes-Pères, 8. | [vertical rule] | Strasbourg, | Rue Des Juifs, 26.

8^o: π^2 ★ 1-298 302 318 329; 260ℓ.; [4], [I]-XVI, 1-500, [2] p., 4 folded, hand-colored plates (geological cross sections) and one large folding colored map.

CONTENTS: [2 pgs], Half title page, verso "Strasbourg, Imprimerie De G. Silbermann."; [2 pgs], Title page, verso blank.; [I]-IV, "Avant-Propos."—dated 1852.; [V]-XVI, "Introduction."; 1-468, Text.; [469]-500, "Table Des Matières."; [1 pg], "Errata."; [1 pg], Blank.; [At end], 4 folding hand-colored plates and one map.

VERY SCARCE. A topographical mineralogy describing the geology and mineralogy of the Bas-Rhin region of France, including four geological cross-sections and one geological map.

REFERENCES: BL: [7107.aaa.18.].

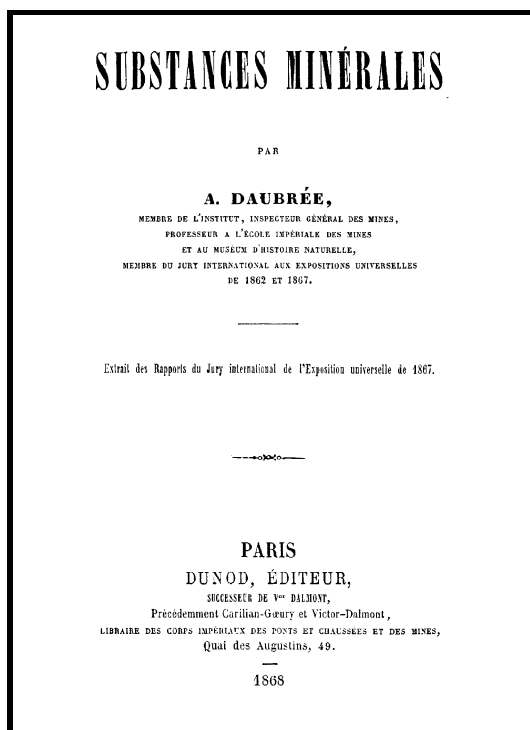
1308. — French, 1867.

Classification adoptée pour la collection des roches

du Muséum d'Histoire Naturelle de Paris. Paris, 1867.

8^o: ix. 47 p. VERY SCARCE.

REFERENCES: BL: [7108.b.55.(10.)].



SUBSTANCES MINÉRALES, 1868

1309. — French, 1868.

Substances Minérales | Par | A. Daubrée | [...5 lines of titles and memberships...] | [rule] | Extrait des Rapports du Jury international de l'Exposition universelle de 1867. | [ornate rule] | Paris | Dunod, Éditeur, | Successeur De V^{or} Dalmont, | Précédemment Carilian-Gœury et Victor-Dalmont, | Libraire Des Corps Impériaux Des Ponts Et Chaussées Et Des Mines, | Quai des Augustins, 49. | [rule] | 1868.

8^o: [1]-218 222; 170ℓ.; [1]-340 p. PAGE SIZE: 208 x 118 mm.

CONTENTS: [1-2], Half title page, "Substances Minérales | [rule] | Extrait des Rapports du Jury international de l'Exposition universelle de 1867," verso "Paris-Imprimé par E. Thunot et C^e Racine, 26."; [3-4], Title page, verso blank.; [5]-331, Text.; [332], Blank.; [333]-340, "Table Des Matières."

VERY SCARCE. The first pages of the text (pp. 5-24) act as an introduction, which includes some historical review and general observations. The second section (pp. 25-80) describes combustibles as they are found in the various countries of the world. The third chapter (pp. 81-114) covers the bitumens. The fourth

(pp. 115-148) describes the mineralogy of iron, while the fifth section (pp. 149-228) concerns the mineralogy of other metals besides iron. The sixth part (pp. 229-292) is on the minerals that serve in the chemical industry. Part seven (pp. 295-505) concerns minerals used as ornaments, including gemstones. Section eight (pp. 506-524) describes various industrial minerals, including quartz, kaolin, feldspar, mica, graphite, etc. Finally, chapter ten (pp. 525-331) provides an overview of rocks and petrology. Through out the mineralogical sections, localities of specific minerals around the world are indicated.

Original issue, 1867: Daubrée's work originally appeared in the *Reports of the International Jury of the 1867 Paris Universal Exposition* under the title:

Exposition Universelle De 1867 | A Paris | [ornate rule] | Rapports Du Jury International | Publiés Sous La Direction | De M. Michel Chevalier | [ornate rule] | Substances Minérales | Par | A. Daubrée | [...2 lines of titles and memberships...] | [ornament] | Paris | Imprimerie Et Librairie Administratives De Paul Dupont | 45, Rue De Grenelle-Saint-Honoré, 45. | [rule] | 1867.

Its importance was recognized, and subsequently the work was reissued as the independent book described above.

REFERENCES: BL: [no copy listed]. • Dana's 7th (Bibliography): 69. • NUC.

1310. — French, 1879.

Etudes Synthétiques de Géologie Expérimentale ... Paris, Dunod, 1879.

2 parts. [Part 1] 8°: 478 p. [Part 2] 8°: 350 p. There are numerous photo-lithos, chromo-lithos, plates & maps.

VERY SCARCE. This is Daubrée's most important work. It is the summary of his research into geochemical processes. The chapters deal with different topics: geochemical processes, applications of engineering principles to the understanding of geological structures and mechanical problems, e.g., the folding and torsion of land structures. This work was of lasting significance and is still referred to today. There are very interesting chapters devoted to the effects of dynamite explosions, mineralization patterns (beautifully illustrated), meteors, artificial minerals, etc.

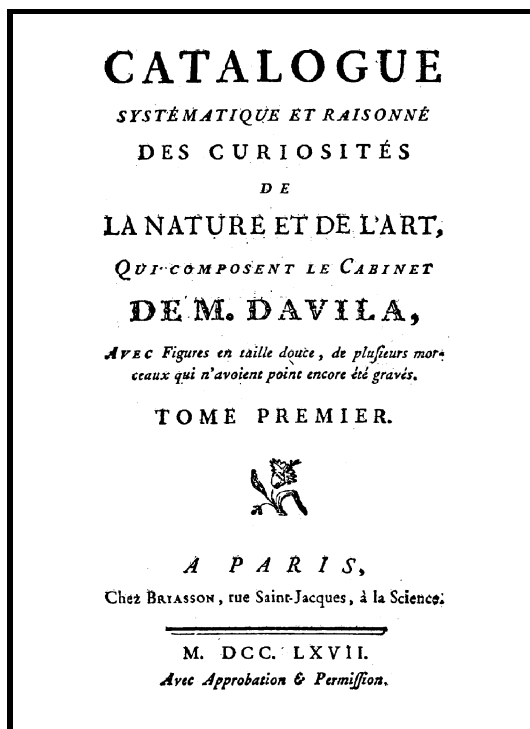
Related work, 1867: *Rapport sur les progrès de la géologie expérimentale. Recueil de rapports sur les progrès des sciences en France.* Paris, Imprimerie Impériale, 1867. 4°: [4], 142 p. Application of the experimental method to chemical phenomena. Artificial production or synthesis of minerals. - Application of the experimental method to physical and mechanical phenomena. - Metamorphism. - Meteorites. Daubrée was a professor with the Natural history museum, member of the Academy of Science and principal of the Mines. DSB 3, 587.

REFERENCES: *American Journal of Science*: 3rd Series, 18 (1879), 150-1 & 19 (1880), 386-90 [reviews of parts I & II by J.L. Smith]. • BL: [07108.k.8.]. • DSB: 3, 586-7.

DÁVILA, Pedro Franco. (BORN: Guayaquil, Spain, c1713; DIED: Madrid, Spain, 1785) *Spanish naturalist.*

Born to wealth, Dávila moved in 1748 to Paris, where he lived most of his life. In 1769, he was appointed perpetual Inspector of the Royal Natural History Cabinet in Madrid.

REFERENCES: ABE: I 260, 45-50; 349, 98. • Thomas, *Dictionary of Biography*, 1884: 728. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 136-40 & 166.



CATALOGUE SYSTÉMATIQUE, 1767

1311. — French, 1767 [Sale catalog].

Catalogue | Systématique Et Raisonné | Des
 Curiosités | De | La Nature Et De L'Art, |
 Qui composent le Cabinet | De M. Davila, |
 Avec Figures en taille douce, de plusieurs mor- |
 ceaux qui n'avoient point encore été gravés. | Tome
 Premier [-Troisième]. | [ornament] | A Paris, | Chez
 Briasson, rue Saint-Jacques, à la Science. | [double
 rule] | M. DCC. LXVII. | Avec Approbation &
 Permission.

3 vols. [VOL 1] 8°: a-b⁸ c² A-Mm⁸ Nn⁶; 304ℓ.;
 [i]-xxxvi, [1]-571, [1] p., 22 engraved plates; [VOL 2] 8°:
 a³ A-Ss⁸; 331ℓ.; [i]-vj, [1]-656 p.; [VOL 3] 8°: π³ A-S⁸
 T⁴ a-s⁸; 295ℓ.; [i]-vj, [1]-290 p., 8 folding plates, [6],
 [1]-286, [2] p. PAGE SIZE: 190 x 122 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "Le Présent
 Catalogue."; [iii]-vj, "Avertissement | De M. Davila."; [vii]-
 xxvj, "Préface."; [xxvii]-xxxv, "Table Synoptique | Du
 Premier Volume."; [1], "Approbation | De M. Adanson."; [1]-
 513, Text.; [514]-558, "Table | Alphabétique | Des
 Curiosités Naturelles."; [559]-[560], "Fautes | A corriger
 dans ce Volume."; [22 plates].; 561-571, "Explication Des
 Figures | Du Tome Premier."; [1 pg], Blank.

[Vol 2] [i-ii], Title page, verso "Le Présent
 Catalogue."; [iii]-vi, "Table Synoptique | Du Second
 Volume."; [1]-615, Text.; [616]-656, "Table | Alphabétique
 | Des Curiosités Naturelle | Continues dans le Second

DE BOMARE

Volume.”

[Vol 3] [i-ii], Title page, verso “Le Présent Catalogue.”; [iii]-vj, “Table Synoptique | Du Troisième Volume.”; [1]-258, Text.; [259]-286, “Table | Alphabétique | Des Petrifications | Contenues dans le troisième Volume.”; [8 folding plates]; 287-290, “Explication Des Figures | Du Tome Troisième.”; [1 pg], Sectional title page, “Catalogue | Raisonné | Des Curiosités | De L’Art.”; [1 pg], Blank.; [4 pgs], “Table | Des Curiosités De L’Art.”; [1]-266, Text.; [267-286, “Table | Alphabétique.”; [1 pg], “Fautes.”; [1 pg], Blank.

VERY SCARCE. Pedro Francisco Dávila, possessor of the largest collection of natural history specimens in Paris, and wishing to establish an institution in Spain to preserve it, approached King Carlos III of Spain. But political difficulties and a approaching war with England distracted the king, who declined the purchase. Because of debts incurred building the collection, creditors forced Dávila to put the accumulation up for auction in Paris. For this purpose, a detailed collection catalog was required. Dávila had already written many descriptions, but it was his introduction through BALTHASAR SAGE to the young ROMÉ DE L’ISLE that created this remarkable record of the collection. Romé de l’Isle took the existing material, added considerably to the mineralogical descriptions, and put the catalog into publishable form. In this task he was assisted by Abbé Duguat who helped with the mineralogical descriptions and Abbé Gua de Malves [1712-1786] who described the shells. Through their efforts, two volumes describing natural history specimens were produced, one of which was entirely devoted to minerals. In addition, a third volume written by Romé de l’Isle probably with assistance from PIERRE REMY, describes the fossils, artwork and books. The Dávila catalog (as it has become known) describes 8,096 mineral specimens that encompass a large range of localities, including a suite of specimens from Potosí in Spanish America. In addition, the catalog lists 5,253 shells, 600 preserved animals, 101 plants, 3,915 fossils, 154 bezoars and calculi, and 402 books. Over 12,000 prints and engravings, 1,741 original artworks, 441 maps, as well as various scientific instruments and precious stones are also described. Thus Dávila’s collection was certainly one of the largest ever formed, and a major auction event of the 18th century.

The published catalog provides a detailed insight into his collection, his special tastes and preferences. The major value of the collection lay in its superb mineral specimens, many of which were finely crystallized examples. Romé de l’Isle fully described the many fine mineralogical specimens, which included examples of native silver from Norway, cassiterite from the Dutch East Indies, crocoite from Siberia, pyrite from Columbia, and calcite from Saxony, etc. Dávila had been a collector for over 20 years when his accumulation was auctioned. In that time, he or his agents had acquired specimens at other auctions, including those that liquidated the collections of ALBERTUS SEBA in 1752, the Abbé Joly de Fleury in 1755, CLAUDE GEOFFROY in 1753 and others. Dávila’s

catalog received wide distribution in Paris, London, Amsterdam, Rotterdam and Basle. This helped push the total realized by Dávila to over 800,000 Spanish reales, more than enough to pay of his creditors, and to finance a second collection, which he immediately began to build. Within two or three years he had again amassed a sizable collection, specializing in minerals, and selected with more knowledge and experience than his first collection had been. Once again he dreamed of establishing the cabinet in Madrid. In October 1771 this became reality when King Carlos III agreed to take over his collections, with Dávila serving as director for life. This enormous collection eventually passed into the National Museum of Natural Sciences in Madrid, where Dávila’s specimens are still preserved today.

REFERENCES: *Berlinische Sammlungen*: 9, 544-5. • BMC. • Dana’s 7th (Bibliography): 69. • DSB: 11, 520-4. • *Freilich Sale Catalog*: no. 150. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 272. • *Göttingische gelehrte Anzeigen*: 1767, 1244. • LKG: XV 20. • Metzger, *Genèse de la Science des Cristaux*, 1918. • Sinkankas, *Gemology Bibliography*, 1993: no. 1594. • Wilson, *History of Mineral Collecting*, 1994: 136-40, 166 & 209 [provides a detailed history of the collections].

DE BOMARE, Jacques Christophe Valmont.

See: Valmont-bomare, Jacques Christophe.

DE BONDAROY, Jean de la Taille.

See: La Taille De Bondaroy, Jean De.

DE BOODT, Anselmus Boëtius.

See: Boodt, Anselmus Boëtius De.

DE L’ISLE, Jean-Baptiste Louis Romé.

See: Romé De l’Isle, Jean-baptiste Louis.

DE LAPPARENT, Albert-Auguste Cochon.

See: Lapparent, Albert-auguste Cochon De.

DE ROBIEN, Christophe Paul.

See: Gautron De Robien, Christophe Paul.

DE SAINT-FOND, Barthélemy Faujas.

See: Faujas De Saint-fond, Barthélemy.

DE SAUSSURE, Horace Bénédict.

See: Saussure, Horace Bénédict De.

DE SAUSSURE, Louis-Albert Necker.

See: Necker De Saussure, Louis-albert.

DE SÉNARMONT, Henri Hureau.

See: Sénarmont, Henri Hureau De.

DE SERRES, Felix Pisani.

See: Pisani De Serres, Felix.

DE STENGEL, J. Nicolaus de.

See: Stengel, Joannes Nicolaus De.

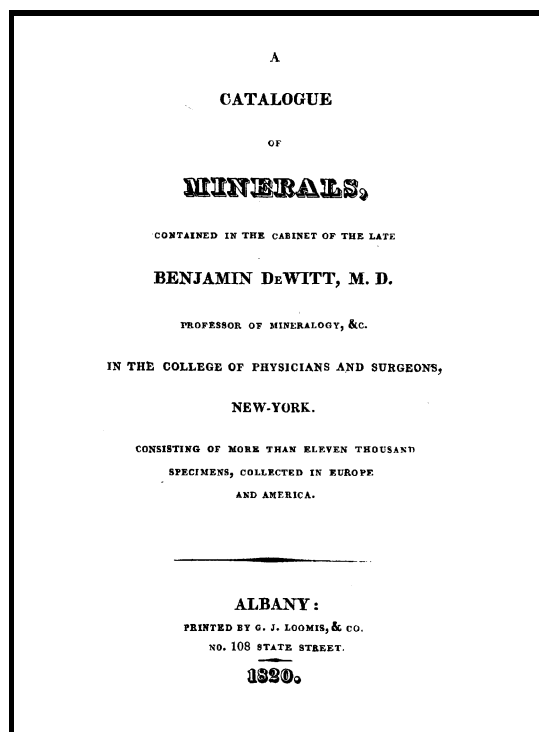
DE VILLIERS, André Jean Marie Brochant.

See: Brochant De Villiers, André Jean Marie.

DE WITT, Benjamin. (BORN: 1774; DIED: New York City, New York, U.S.A., 11 September 1819) *American physician, scientist & educator.*

De Witt was educated in medicine at the University of Pennsylvania, from which he received his M.D. in 1797. He was appointed professor of medicine at Columbia College in 1807 and the following year a professor of chemistry as well. While holding the position of health officer for New York City, De Witt was stricken with illness while inspecting the Yellow fever quarantine grounds of Staten Island. He published a dissertation, *A Chemico-Medical Essay to Explain the Operation of Oxygen* [sic] (Philadelphia, 1797).

REFERENCES: ABA: I 432, 386-389. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • BBA: I 323, 378-379. • Herringshaw's *National Library of American Biography*. • Poggendorf: 1, col. 566. • WBI. • Wilson, *History of Mineral Collecting*, 1994.



CATALOGUE OF MINERALS, 1820

1312. — English, 1820 [Collection catalog].

A | Catalogue | Of | Minerals, | Contained In The Cabinet Of The Late | Benjamin DeWitt, M.D. | Professor Of Mineralogy, &c. | In The College Of Physicians And Surgeons, | New-York. | Consisting Of More Than Eleven Thousand | Specimens, Collected In Europe | And America. | [tapered rule] Albany: | Printed By G.J. Loomis, & Co. | No. 108 State Street. | [tapered rule] 1820.

8°: π^1 1-13⁴ 14¹; 54 ℓ .; [1]-108 p. Bound in printed wraps with the title repeated and contained within an

ornate border on the front cover. PAGE SIZE: 222 x 128 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-108, Text [=catalog of mineral specimens].

RARE. A collection sale catalog of De Witt's very large mineral collection (purchased from the estate of Archibald Bruce?). The text lists thousands of specimens by species with each locality represented in the collection arranged underneath. Many foreign examples are present. In 1804, he had donated a suite of New York mineral specimens to the American Academy of Arts and Sciences.

REFERENCES: Hazen & Hazen, *American Geological Literature*, 1980: no. 3169. • NUC: 142, 126-27 [ND 0232299]. • Wilson, *History of Mineral Collecting*, 1994: 167 & 210.

DECKER, August Heinrich. (BORN: 1685; DIED: 1752) *Prussian mining expert.*

Royal Prussian Mining Commissioner at Wettin. He built a large mineral collection of over 6,000 specimens.

REFERENCES: NDB. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 167.

Vollständigen Mineralienkabinett, welches verschiedene Kenner zusammengebracht, und zuletzt ... August Heinrich Decker besessen. (Halle, 1753).

See: Lange, Johann Joachim.

1313. — German, 1780 [Sale catalog].

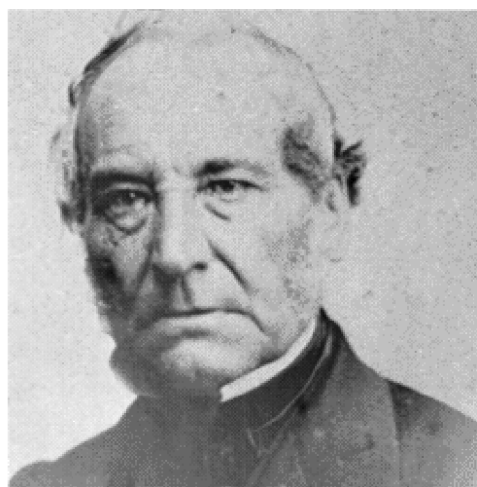
Verzeichniß einer sehr beträchtlichen Mineralien-Sammlung, welche aus allen Theilen des Erdbodens zusammenbegracht worden sind ... August Heinrich Decker ... Halle, 1780.

8°: [8], 112 p.

VERY RARE. Description of the mineralogical portion of Decker's natural history cabinet, which was put up for sale in August 1780 by his heirs.

DEL RÍO, Andrés Manuel.

See: Río, Andrés Manuel Del.



DELAFOSSÉ

DELAFOSSE

DELAFOSSE, Gabriel. (BORN: San Quentin, France, 24 February 1796; DIED: Paris, France, 13 October 1878) *French mineralogist, geologist & chemist.*

However, Gabriel Delafosse (1796-1878), not stopping with the only numerical data, considers that their chemical composition should be studied. It thus defines the difference between the "integral molecule" (molecule) and the "chemical molecule" (atom) of the crystals. By seeking the provision of the atoms inside the physical molecule, Delafosse is one of the first, in mineralogy, to apply the atomic theory. From this study on the chemical composition of minerals result from many work on the conditions of crystallization. Thus isomorphism and polymorphism with Eilhardt Mitscherlich (1794-1863) will be discovered, then will appear the concepts of dimorphism, homeomorphism, etc.

REFERENCES: ABF: I 292, 21-26. • *L'Année Scientifique et Industrielle*: 22 (1878), 494 [by L. Figuier]. • Barr, *Index to Biographical Fragments*, 1973: 66. • DBF: 10, 632-3. • DSB: 15, 114-5 [by K.L. Taylor]. • Fruton, *Bio-Bibliography*, 1982: 158 [other refs.]. • Glaeser, E., *Biographie nationale des contemporains*. Paris, 1878. 4,824 p. [French national biography of the 19th century.]. • Poggendorff: 1, cols. 538-9 & 3, 344. • *Revue Scientifique*: Series 2, 8 (1878), 481-4 [by C. Friedel]. • Sarjeant, *Geologists*, 1980: 2, 881 & Suppl. 2 (1995), 1, 571. • WBI. • *World Who's Who in Science*: 435.

1314. — French, 1833 [2nd edition].

Précis | Élémentaire | D'Histoire Naturelle,
| Par G. Delafosse, | [...one line of titles and
memberships...] | L'Usage Adopté Par Le Conseil
Royal De L'Instruction Publique | Pour Les
Collèges Et Les Écoles Normales Primaires. |
Première Partie: | Minéralogie Et Géologie. | [rule]
| Deuxième Édition. | [rule] | Paris, | Librairie
Classique Et Élémentaire | De L. Hachette, | Rue
Pierre-Sarrazin, N° 12. | [tapered rule] | 1833.
2 vols.

VERY SCARCE. Contents pt. 1. Minéralogie et géologie – pt. 2. Botanique. Zoologie.

4th edition, 1841: *Précis Élémentaire d'Histoire Naturelle*. Paris, Hachette, 1841. xii, 646 p., 46 plates.

5th edition, 1855: *Précis Élémentaire d'Histoire Naturelle*. Paris, P.L. Hachette et Cie., 1855. xxviii, 687 p., 46 plates.

8th edition, 1858: *Précis Élémentaire d'Histoire Naturelle*. Paris, 1858. 687 p.

9th edition, 1863: *Précis Élémentaire d'Histoire Naturelle*. Paris, 1863. 691 p., 46 plates.

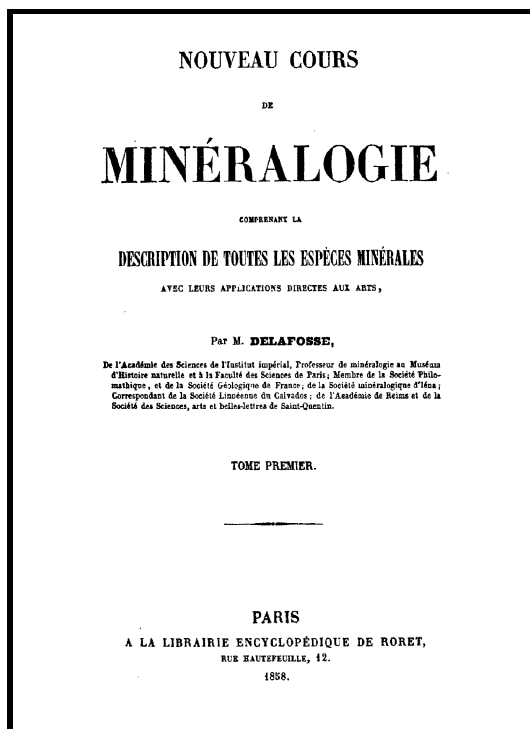
1315. — French, 1858-62.

Nouveau Cours | De | Minéralogie | Comprenant
La | Description De Toutes Les Espèces Minérales
| Avec Leurs Applications Directes Aux Arts, | Par
M. Delafosse, | [...5 lines of titles and memberships...]
| Tome Premier. [-Troisième]. | [ornate rule] | Paris
| A La Librairie Encyclopédique De Roret, | Rue
Hautefeuille, 12. | 1858 [-1862].

[TITLE PAGE OF ATLAS READS:]

Cours | De | Minéralogie | Par M. Delafosse. | [rule]
| Explication Des Planches. | [ornate rule] | Atlas |
[ornate rule] | Paris | A La Librairie Encyclopédique
De Roret, | Rue Hautefeuille, 12.

3 vols. and atlas. [VOL 1: 1858] 8°: π^2 1-348



NOUVEAU COURS DE MINÉRALOGIE, 1858

351; 275ℓ.; [4], [1]-546 p.; [VOL 2: 1860] 8°: π^2 1-308
314; 246ℓ.; [4], [1]-486, [2] p.; [VOL 3: 1862] 8°: π^2
1-398 402; 316ℓ.; [4], [1]-628 p.; [Atlas] 8°: [1]-24 p., 40
folding plates (showing crystal diagrams). PAGE SIZE:
Text, 214 x 134 mm.; Atlas, 212 x 152 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Nouveau
Cours | De | Minéralogie. | [rule] | Tome I.," verso blank.; [2 pgs], Title page, verso blank.; [1]-526, Text.; [527]-540,
"Appendice | Au Premier Volume.," [541]-546, "Table Des
Matières | Du Premier Volume."

[Vol 2] [2 pgs], Half title page, "Nouveau Cours | De
| Minéralogie. | [rule] | Tome II.," verso blank.; [2 pgs],
Title page, verso blank.; [1]-482, Text.; [483]-486, "Table
Des Matières | Du Second Volume.," [1 pg], "Errata | Pour
Le Premier Volume.," [1 pg], Blank.

[Vol 3] [2 pgs], Half title page, "Nouveau Cours | De
| Minéralogie. | [rule] | Tome II.," verso blank.; [2 pgs],
Title page, verso blank.; [1]-607, Text.; [608]-613, "Table
Des Matières | Du Troisième Volume.," [614], "Errata.,"
[615]-628, "Index | ou | Table Générale Des Espèces |
Décrites Dans Les Deux Derniers Volumes."

[Atlas] [1-2], Half title page, "Cours | De |
Minéralogie. | [rule] | Atlas. | [rule]," verso blank.;
[3-4], Title page, verso blank.; [5]-24, "Explication Des
Planches.," [At end], 40 folding plates.

VERY SCARCE. In *The New Course of Mineralogy*,
Delafosse concentrates his text on the practical use of
minerals in industry.

REFERENCES: NUC.

1316. — French, 1867.

En France | [ornate rule] | Rapport | Sur | Les
Progres De La Minéralogie | Par G. Delafosse | [...3
lines of titles and memberships...] | Publication Faite

Sous Les Auspices | Du Ministère De L'Instruction
Publique | [ornament] | Puris | Imprimé Par
Autorisation De S. Ex. Le Garde Des Sceaux | A
L'Imprimerie Impériale | [rule] | M DCCC LXVII.

8°: [4], [1]-97, [1] p.

CONTENTS: [2 pgs], Half title page, verso blank;
[2 pgs], Title page, verso blank.; [1]-97, Text.; [1 pg],
Blank.

VERY SCARCE. Published as: *Recueil de rapports
sur les progrès des lettres et des sciences en France*,
this work reports on the progress of mineralogy in
France as a science over the course of 20 years.
Sections include systems of crystallography, physical
and chemical mineralogy, and classification systems of
mineralogy. Delafosse abundantly quotes the work of
Pasteur, his pupil.

REFERENCES: NUC.



DELAMÉTHÉRIE

DELAMÉTHÉRIE, Jean-Claude. (BORN: La
Clayette, [Mâconnais], France, 4 September 1743;
DIED: Paris, France, 1 July 1817) *French physician,
mineralogist, geologist, biologist, chemist, & natural
philosopher.*

Delamétherie was educated in medicine, but never
practiced. From 1801 until his death he was professor
of natural sciences at the Collège de France in Paris.
In 1785, he became editor of the influential, *Journal de
Physique*, a position he held until his death. He had a vivid
imagination, which ruled his scientific thought.

REFERENCES: Barr, *Index to Biographical Fragments*,
1973: 147. • *Biographie Universelle*: 28, 461-3 [by G. Cuvier].
• DSB: 7, 602-4 [by K.L. Taylor]. • *Journal de Physique*: 85
(1817), 78-107. • Kettner, Radim., "Jean André de Luc
(1727, +1817) a Jean Claude de la Métherie (1743, +1817)
a jejich teorie o Zemi," *Casopis pro Mineralogii a Geologii*, 12
(1967), no. 223-5. • *Nouvelle Biographie Générale* (Hoefel):
29, cols. 209-12. • Poggendorff: 1, cols. 1360-1. • Sarjeant,
Geologists, 1980: 3, 1708. • Thomas, *Dictionary of Biography*,
1884: 1363. • *World Who's Who in Science*: 436.

1317. — French, 1795 [First edition].

Théorie | De | La Terre; | Par Jean-Claude
Delamétherie. | [rule] | [...3 lines of quotation, signed

THÉORIE

DE

LA TERRE;

PAR JEAN-CLAUDE DELAMÉTHÉRIE.

*Sed quibus ille modis conjectus materiai
Fundris cælum ac terram, pontique profunda,
..... Ex ordine ponam.*

LUCRET. lib. V, vers. 397.

TOME PREMIER.

A PARIS,

Chez MARADAN, Libraire, rue du
Cimetière André-des-Arcs, n°. 9.

L'AN III DE LA RÉPUBLIQUE,
1795 (vieux style).

THÉORIE DE LA TERRE, 1795

"Lucret. lib. V, vers. 397." | [rule] | Tome Premier. |
[tapered rule] | A Paris, | Chez Maradan, Libraire,
rue du | Cimetière André-des-Arcs, n°. 9. | [rule] |
L'An III De La République. | 1795 (vieux style).

3 vols. [VOL 1] 8°: a⁸ A-Cc⁸ Dd³; 220ℓ.; [i]-xvj,
[1]-422, [2] p., 2 folding plates. [VOL 2] 8°: π⁴ A-Ee⁸
Ff⁴; 232ℓ.; [i]-vii, [1]-456 p., 2 folding plates. [VOL 3]
8°: π⁴ A-Ff⁸ Gg⁴; 240ℓ.; [i]-viii, [1]-471 p., 3 folding
plates. PAGE SIZE: 194 x 120 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, "Théorie | De
| La Terre. | [rule] | Tome Premier. | [rule]," verso blank;
[iii-iv], Title page, verso blank.; v-xii, "Introduction."; xiv-
xvj, "Table Des Chapitres | Du Tome Premier."; [1]-422,
Text.

[Vol 2] [i-ii], Half title page, "Théorie | De | La Terre.
| [rule] | Tome Second. | [rule]," verso blank.; [iii-iv], Title
page, verso blank.; [v]-vij, "Table Des Chapitres | Du Tome
Second."; [1]-456, Text.

[Vol 3] [i-ii], Half title page, "Théorie | De | La Terre.
| [rule] | Tome Troisième. | [rule]," verso blank.; [iii-iv],
Title page, verso blank.; [v]-vij, "Table Des Chapitres | Du
Tome Troisième."; [1]-471, Text.; [1 pg], Blank.

VERY SCARCE. One of Delamétherie's major
works, which enjoyed considerable popularity during
his lifetime in spite of its ultra-Neptunian theories.
Théorie de la Terre covers all aspects of the author's
cosmological theory, with respect to the earth. A
firm believer in Wernerian theory, he postulates that
all things including living organisms were originally
crystallized from a liquid medium. He also believed that
the broad features of the earth's surface like mountains
and ocean basins were caused by the action of irregular

DELAMÉTHÉRIE

crystallizations deep with in the earth, moving water and the planetary motion of the earth. Erosion, he thought, played no significant role in geological history, and no major alterations to the crust had occurred since the main valleys and mountains were created by a primordial crystallization process. Despite these theories, Delamétherie had a wide influence among his contemporaries. If the refusal of the author to accept the significant role erosion plays in shaping the earth has lessened his reputation to historians of geology, he was innovative in his idea about evolution, speculating that man was a kind of monkey improved by social state.

The text of volume one is mostly mineralogical in character with discussions about the crystallization from fire of various substances, including the earths, airs, waters, ores, salts, stones, and precious stones. The general form of the earth is speculated on, as is the nature of electricity, magnetism, and light. Volume two could be considered an early volume on petrology, and includes discussions about various rock types including porphyrite, breccia, obsidian, lava, amber, coal, fossils, gypsum deposits, granite, as well as theories about volcanoes, rivers, seas and oceans. Volume three draws conclusions from the first two volumes and presents Delamétherie's overall theory.

REFERENCES: Brunet: 4568. • DSB: 7, 602-4. • LKG: XIII 202. • Zittel, *History of Geology*, 1901: p. 77-8.

1318. 2nd edition, 1797: *Théorie | De La Terre, | Par | Jean-Claude Delamétherie. | Seconde Édition, corrigée, et augmentée | d'une Minéralogie. | [rule] | [...3 lines of quotation, signed "Lucretius, lib. v, vers. 597." | [rule] | Tome Premier. | [tapered rule] | A Paris, | Chez Maradan, Libraire, rue du | Cimetière André- | des-Arts, n°. 9. | An V = 1797.*

5 vols. [VOL 1] 8°: ?? p.; [VOL 2] 8°: ?? p.; [VOL 3] 8°: ?? p., 7 folding plates. [VOL 4] 8°: [VOL 5] 8°:

VERY SCARCE. The second edition of *Théorie de la Terre* expands the volumes on mineralogy and petrology from one to two.

REFERENCES: Dana's 7th (Bibliography): 69. • DSB: 7, 604. • LKG: XIII 202. • Zittel, *History of Geology*, 1901: pp. 77-8.

1319. German transl., 1797: *Jean Claude Delametherie | Theorie der Erde. | [tapered rule] | Aus dem Französischen übersetzt | und | mit einigen Anmerkungen vermehrt | von | D. Christian Gotthold Eschenbach, | Professor der Chemie in Leipzig. | [rule] | Nebst | einem Anhang | von | D. Johann Reinhold Forster, Professor in Halle. | [rule] | Erster Theil, | mit zwey Kupfertafeln. | [tapered rule] | Leipzig, | bey Breitkopf und Härtel. 1797.*

3 vols. [VOL 1: 1797] 8°: *8 A-Aa⁸ Bb²; 202ℓ.; [I]-XVI, [1]-388 p., 2 folding plates. [VOL 2: 1797] 8°: *4 A-Aa⁸ Bb⁴ Cc⁶; 206ℓ.; [8], [1]-404 p., 2 folding plates. [VOL 3: 1798] 8°: π¹ A-Aa⁸ Bb⁷ χ¹ 2A-2E⁸ 2F-2G⁶; 255ℓ.; [2], [1]-398, [2], [1]-108 p., 3 folding plates.; PAGE SIZE: 185 x 112 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso 3 lines of quotation signed Lucret.; [iii]-xii, "Vorerinnerung."; [xiii]-xvi, "Inhalt."; [1]-388, Text.; [At end], 2 plates.

[Vol 2] [2 pgs], Title page, verso blank.; [6 pgs], "Inhalt."; [1]-404, Text.; [At end], 2 plates.

[Vol 3] [2 pgs], Title page, verso blank.; [1]-398, Text.; [1 pg], Sectional title page, "Anmerkungen | zu | Jean Claude Delametherie | Theorie der Erde | von | D. Johann Reinhold Forster, | Professor in Halle."; [1 pg], Blank.; [1]-108, Text.; [At end], 3 plates.

VERY SCARCE. Translation and enlargement into German by the chemist Christoph Gotthold Eschenbach [1753-1831] and Johann Reinhold Forster of *Théorie de la Terre* (Paris, 1795). At the end of volume 3 with separate paging is a supplemental tract by Johann Reinhold Forster providing a commentary on ideas presented in Delamétherie's work.

Johann Reinhold Forster. (BORN: Dirschau, Germany, 22 October 1729; DIED: Halle/Saale, Germany, 9 December 1798) *German naturalist of Scottish heritage.* Father of the renowned naturalist Johann Georg Adam Forster [1754-1794], Johann Reinhold was a man of great scientific attainments, but an intractable temper. Commissioned by empress Catherine to survey the Russian colonies of Saratov province, Forster quarreled with the government and left with his family for England. There he obtained a position as instructor of natural history and modern languages at the nonconformist academy at Warrington. His temper soon compelled him to resign this appointment, and was forced for several years to earn a living publishing translations. An invitation to accompany Captain Cook on his third voyage around the world was accepted on the condition that his son, Johann Georg Adam be his assistant. The account of these travels was published by the son as *A Voyage round the World* (London, 1777; German, Berlin, 1778-80), which is considered the "first example of the glowing yet faithful description of natural phenomena which has since made a knowledge of them the common property of the educated world." [Encyc. Brit.] After returning to England, Johann Reinhold landed in debtor's prison, but was released after receiving a professorship at the University of Halle, where he remained the rest of his life.

REFERENCES: LKG: XIII 203a. (Forster) ADB: 7, 166-72. • *Australasian Biographical Archive*: 123, 288-305. • BBA: I 418, 286-309; II 1480, 326. • *Catalogue of Portraits of Naturalists*: 440-1 [4 portraits listed]. • DBA: I 334, 101-240; II 385, 168-192. • Drugulin, *Sechstaend Portraits*, 1863: nos. 1663-8 & 6111. • DSB: 5, 76-7 [by M.E. Hoare]. • *Encyclopaedia Britannica*, 11th edition. • Hoare, M.E., "Johann Reinhold Forster (1729-1798)," *Problems of Natural History*, 6 (1971), 1-8. • Hoare, M.E., "Johann Reinhold Forster-The Neglected 'Philosopher' of Cook's Second Voyage (1772-1775)," *Journal of Pacific History*, 2 (1967), 215-24. • Hoare, M.E., "A strange and eventful history: the scientific correspondence of J.R. Forster (1729-98)," *Records of the Australian Academy of Science*, 2 (1972), no. 3, 76-77. • Hoare, M.E., "'Ulysses' or 'incubus'?" J.R. Forster's first period in England, 1766-1772," *Journal of the Society for the Bibliography of Natural History*, 7 (1976), no. 4, 375-383. • *ISIS*, 1913-65: 1, 427. • NDB: 5, 301-2 [by G. Steiner]. • Poggendorff: 1, cols. 775-6. • Sarjeant, *Geologists*, 1980: 2, 1026-7, Suppl. 1 (1986), 1, 423-4 & Suppl. 2 (1995), 1, 625. • Staffeu & Cowan, *Taxonomic Literature*, 1976-88: 1, 859-61. • WBI. • *World Who's Who in Science*: 589-90.

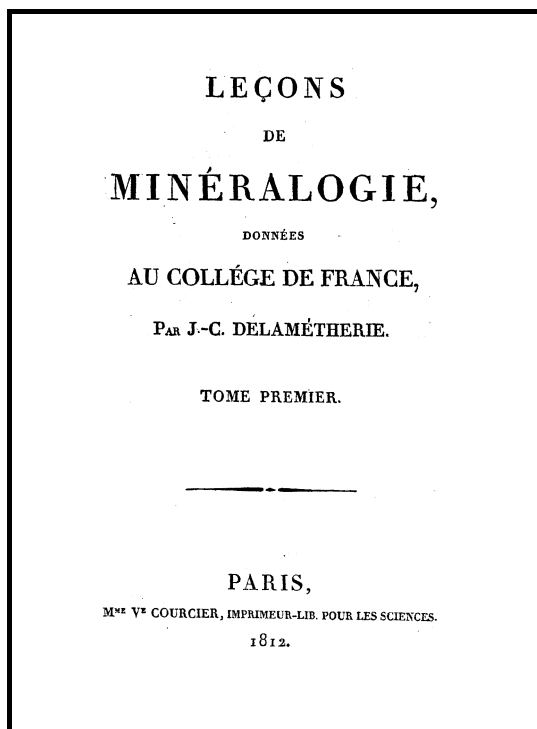
1320. — French, 1812.

Leçons | De | Minéralogie, | Données | Au Collège De France, | Par J.-C. Delamétherie. | Tome Premier. [-Second.] | [ornate rule] | Paris, | M^{me} V^e Courcier, Imprimeur-Lib. Pour Les Sciences. | 1812.

2 vols. [VOL 1] 8°: π² a-h⁸ 1-27⁸ 28¹; 283ℓ.; [2], [i]-ii, [i]-cxxxvii, [1]-433, [1] p.; [VOL 2] 8°: π² 1-39⁸ 40³; 316ℓ.; [2], [1]-629, [1] p. PAGE SIZE: 198 x 120 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [i]-ii, "Préface."; [i]-cxxxvii, "Introduction."; [1]-433, Text.; [1], "Corrections Et Additions."

[Vol 2] [2 pgs], Title page, verso blank.; [1]-611, Text.; [612]-629, "Table Des Matiers | Continues Dans



LEÇONS DE MINÉRALOGIE, 1812

Le Premier Volume.”; [1 pg], Blank.

RARE. These *Lessons on Mineralogy* were used by Delaméthérie in his lectures at the Collège de France. The text covers the standard mineralogical information and is based upon Haüy’s theories of crystallization and Werner’s ideas of formation from water.

REFERENCES: Dana’s 7th (Bibliography): 69. • LKG: XII 186.

1321. — French, 1798.

Analyse des travaux sur les sciences naturelles pendant les années 3, 4, 5 de la République etc. Paris, 1798.

8°: VERY SCARCE.

REFERENCES: LKG: VI 113.

DELBOS, Joseph.

1322. — French, 1866/7.

Description Géologique et Minéralogique du Département du Haut-Rhin par Joseph Delbos et Joseph Koechlin-Schlumberger. Mulhouse, Emile Perrin, 1866-7.

2 vols. [VOL 1: 1866] 8°: xxiii, 484 p., one folded chromolithographed geological map. [VOL 2: 1867] 8°: 454 p.

VERY SCARCE. Co-authored with J. Koechlin-Schlumberger [1793-1863]. This topographical work describes the geology and mineralogy of the Haut-Rhin region of France. It contains a geological map of Alsace done in 43 colors.

REFERENCES: BL: [no copy listed].

DELEUZE, Joseph Philippe François. (BORN: 1753; DIED: 1835) *French librarian & naturalist.*

Librarian of the Muséum Royale d’Histoire Naturelle.

REFERENCES: *Catalogue of Portraits of Naturalists*: 353 [1 portrait listed].

1323. — French, 1823.

Histoire et Description | du | Muséum Royal | d’Histoire Naturelle, | Ouvrage rédigé d’après les Ordres de l’Administration | du Muséum, | par M. Deleuze, Avec trois plans et quatorze vues des Jardins, des Galeries | et de la Ménagerie. | A Paris, | Chez M.A. Royer, au Jardin du Roi. | De l’Imprimerie de L.T. Cellot, Rue du Colombier, No 30. | M. DCCC XXIII.

2 vols. [VOL 1] 8°: [i]-vi, [1]-330 p., 8 engraved plates (3 folding showing the royal gardens). [VOL 2] 8°: [4], [331]-720 p., 9 engraved plates. Text is continuously paged between the vols. PAGE SIZE: 229 x 151 mm.

VERY SCARCE. An early history of one of the oldest and most important natural history museums of the world and its associated botanical gardens. It was founded by Louis XIII in 1635, and Deleuze provides a detailed history of the museum including accounts of the various departments including the cabinets of geology, mineralogy, mammals, birds, etc. A descriptive list of curators and foreign correspondents in 1822 and a bibliographical list of teachers and voyagers connected with the Museum is also included.

REFERENCES: *Freilich Sale Catalog*: no. 152. • Jonathan Hill, Bookseller: cat. 128 (1999), no. 27. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: 1, 124-5, no. 664.

DELLA FRATTA ET MONTALBANO, Marco Antonio.

See: Fratta Et Montalbano, Marco Antonio Della.

DEMARTY, Joseph.

1324. — French, 1898.

Les Pierres d’Auvergne Employées dans la Joaillerie, la Tabletterie et les Arts Décoratifs. Par Joseph Demarty. Paris, Chamalieres, 1898.

8°: [1]-64 p.

CONTENTS: [1-2], Title page, verso blank.; [3]-4, “Introduction.”—signed J.D.; [5]-62, Text.; [63]-64, “Table Des Matières.”

VERY RARE. The text provides a comprehensive list of mineral species found in the region of Auvergne in France, emphasizing those that may be used in jewelry and decorative art. .

REFERENCES: BL: [no copy listed]. • BMC. • NUC.

DÉMESTE, Jean. (BORN: 1743; DIED: Liège, Belgium, 20 August 1783) *Belgian physician, geologist & mineralogist.*

Démeste was a medical doctor, principally a surgeon to the Army troops of the Bishop-Prince of Liège. His intensive study of chemistry gained him membership in many learned societies.

REFERENCES: ABF: I 300, 211-212. • BAB: I 182, 254-263 / 461, 292. • *Biographie Universelle*: 11, 28. • Laissus,

DENOMBREMENT

Cabinets d'Histoire Naturelle, 1964. • *Nouvelle Biographie Générale* (Hoefer): **13**, 527. • Poggendorff: **1**, col. 548. • Stouffs, *Inventaire des Papiers du Didot*, 1963. • WBI.

1325. — French, 1779 [First edition].

Lettres | Du | Docteur Démeſte, | [...5 lines of titles and memberships...] | Sur la Chymie, la Docimasia, la Cristallographie, | la Lithologie, la Minéralogie & la Physique | en Général. | [rule] | [Quote, signed Aeneid] | [rule] | Tome Premier [-Second]. | [ornament] | A Paris | [To left:] Chez { [to right:] Didot, Imprimeur de Monsieur, | Quai des Augustins. | Ruault, Libraire, rue de la Harpe. | Clousier, Imprimeur & Libraire, | rue Saint-Jacques. | [double rule] | M.DCC.LXXIX. | Avec Approbation, & Privilège du Roi.

2 vols. [VOL 1] 12°: a⁶ A-Bb¹² Cc⁶; 312ℓ.; [1]-11, [1], [1]-611, [1] p. [VOL 2] 12°: a⁶ A-Dd¹² Ee¹¹; 341ℓ.; [i]-xij, [1]-665, [3] p.

CONTENTS: [Vol 1] [1-2], Half title page, "Lettres | du | Docteur Démeſte, | au | Docteur Bernard. | [rule] | Tome Premier. | [rule]," verso blank.; [3-4], Title page, verso blank.; [5]-6, "Avertissement de l'Éditeur."; [7]-11, "Table des Lettres contenues dans ce Volume."; [1 pg], "Errata du Tome Premier."; [1]-610, Text.; 611, "Approbation."; [1 pg], Blank.

[Vol 2] [Vol 1] [i-ii], Half title page, "Lettres | du | Docteur Démeſte, | au | Docteur Bernard. | [rule] | Tome Second. | [rule]," verso blank.; [iii-iv], Title page, verso blank.; [v]-xij, "Table des Lettres Contenues dans ce Volume."; [1]-562, Text.; 563-665, "Table des Matières contenues dans les deux Volumes."; [2 pgs], "Addition a l'Errata du Tome Premier."; [1 pg], "Privilege du Roi."

RARE. These 48 letters cover a variety of subjects in chemistry, husbandry, crystallography, lithology, mineralogy and physics. They contain many references to other works and personal communications with Romé de l'Isle. Treated as a whole, the letters work as an elementary course in chemistry and mineralogy. The mineral forms of a variety of metals, including arsenic, mercury, zinc, iron, copper, lead, are treated in volume two. The work concludes with an extremely detailed index.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: II 213. • BL: [no copy listed]. • BMC. • CBN: [R.33382-383]. • Cole, *Chemical Literature*, 1988: no. 366. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 167. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 288. • Hoover Collection: no. 262. • LKG: VI 75. • *Monthly Review*: **60** (1779), 536-9 [review of volume one]. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 1117. • NLM 18th Century Books (Blake): p. 114. • NUC: [ND 0158160]. • *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts*: **13** (1779), 324-5 & **17** (1781), 216-27 [review]. • Sinkankas, *Gemology Bibliography*, 1993: no. 1639.

1326. German transl., 1784: Herrn Doktor Demeste's, | [...2 lines of titles and memberships...] | Briefe | über die | Chemie, Probierkunst, Kristallogra= | phie, Lithologie, Mineralogie | und Physik. | An den | Herrn Doktor Bernard, | [...2 lines of titles and memberships...] | [ornate rule] | Aus dem Französischen. | [rule] | Novus Rerum nascitur ordo. Aeneid. Lib. VII. | [rule] | Erster Theil. | [ornate rule] | St. Petersburg u. Leipzig, | bey Johann Zacharias Logan 1784.

8°: [1]-439 p.

VERY RARE. German translation by () Bernard [see

note below] of *Lettres du Docteur Démeſte* (Paris, 1779). Apparently, this is a German rendering of the first volume only.

LKG records that the translation was performed by Benedickt Franz Johann Hermann [1755-1806].

() **Bernard**. (BORN: ; DIED:) *German(?) physician*. Berndard was a professor of medicine on the faculty of the University of Douay, as well as a Fellow of the Royal Society of London. — *From title page*.

REFERENCES: *Allgemeine Deutsche Bibliothek*: Anhang to Bands 52-86, **2**, 712 [review]. • BL: [no copy listed]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 288. • LKG: VI 76a. (Bernard)

DENOMBREMENT.

See: D., M.I.m.d.s.

DÉODAT, Gratet De.

See: Dolomieu, Dieudonné Sylvain Guy Tancrède.



DES CLOIZEAUX

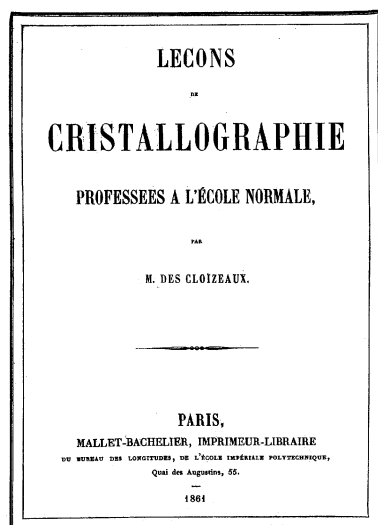
DES CLOIZEAUX, Alfred-Louis-Olivier Legrand.

(BORN: Beauvais, France, 17 October 1817; DIED: Paris, France, 6 May 1897) *French mineralogist & crystallographer*.

Des Cloizeaux was born into a family with a long tradition in the legal profession. He studied at the Lycée Charlemagne in Paris where he came under the influence of A. LÉVY. This association introduced Des Cloizeaux to the study of minerals and crystals, and influenced his attendance of courses on mineralogy taught by A. BRONGNIART at the Muséum d'Histoire Naturelle and A. DUFRÉNOY at the École des Mines. A friendship with Jean-Baptiste Biot [1774-1862], gave Des Closieux the chance to become a member of a government sponsored expedition to Iceland to visit the sources of Iceland spar. During this trip, he visited many English geologists and mineralogists. In 1876, he was made professor of mineralogy at the Muséum, replacing G. DELAFOSSE, who he had assisted since 1873. Des Cloizeaux remained at the Muséum until 1892. He made major studies in the optical properties of minerals, particularly the chondrodites, zoisite and rhombic pyroxenes and amphiboles.

REFERENCES: ABF: I 635, 394-398. • Barr, *Index to Biographical Fragments*, 1973: 51. • *Bulletin de la Société Française de Minéralogie*: **20** (1897), 167-72 & 259-87, portrait. • *Bulletin de la Société Géologique de France*: 3rd

Series, 25 (1897), 459-60. • Comptes rendus hebdomadaires des séances de l'Académie des sciences: 124 (1897), 983-4. • DSB: 4, 65-7 [by K.L. Taylor]. • *Geological Magazine*: 35 (1898), no. 10, 480. • Lacroix, A., *Notice historique sur François-Sulpice Beudant et Alfred-Louis-Olivier Legrand des Cloizeaux. Membres de la section de Minéralogie Paris, Académie des Sciences*, 1930. 101 p., 2 portraits. • Lacroix, *Figures des Savants*, 1932-8: 1, 242-72, plates 29-30. • *Mineralogical Magazine*: 12 (1898), no. 54, 37-8. • Poggendorff: 1, col. 558, 3, 354 & 4, 321. • *Proceedings of the Geological Society, London*: 1897-8, lii. • *Proceedings of the Royal Society of London*: 63 (1898), xxv-xxviii. • Sarjeant, *Geologists*, 1980: 2, 891. • WBI. • *World Who's Who in Science*: 449.



LECONS, 1861

1327. — French, 1861.

[Contained within a double rule box:] Lecons | De | Cristallographie | Professeees A L'École Normale, | Par | M. Des Cloizeaux. | [ornament] | Paris, | Mallet-Bachelier, Imprimeur-Libraire | Du Bureau Des Longitudes, De L'École Impériale Polytechnique, | Quai des Augustins, 55. | [rule] | 1861.

4°: [1]-100 p., illus. Title from front wrap.

RARE. Printed from a manuscript holograph, these *Lessons on Cristallography* were created by Des Cloizeaux for his students at the École Normale. The text provides information about all aspects of the crystallographic science, including definitions, crystal systems, notation, etc.

REFERENCES: NUC: 140, 293.

1328. — French, 1862-74 (-1893).

Manuel | De | Minéralogie | Par A. Des Cloizeaux | [...7 lines of titles and memberships...] | [rule] | Tome Premier [-Second] | [rule] | Paris | Dunod, Éditeur, | Libraire Des Corps Impériaux Des Ponts Et Chaussées Et Des Mines, | Quai des Augustins,

49. | [rule] | 1862 [-1874] | Droits de traduction et de reproduction réservés.

2 vols. plus atlas. [VOL 1: 1862] 8°: π^2 a-c⁸ d² 1-35⁸ 36⁶; 314⁴.; [4], [i]-l, [2], [1]-572 p., 22 plates (numbered 1-22; nos. 1 & 2 folding). [VOL 2: 1874-93] 8°: π^8 b-c⁸ d² a⁴ 1-34⁸; 302⁴.; [i]-lx, [1]-544 p., 20 plates (numbered 23-40; no. 24 folding). Fascicle 2 was published in 1893. [Atlas] No title page, 84 plates (numbered I-LXXXIV). PAGE SIZE: 214 x 130 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Manuel | De | Minéralogie | I.," verso "Paris—Imprimé par E. Thunot et Ce, Rue Racine, 26.," [2 pgs], Title page, verso blank.; [i]-vi, "Préface."—dated March 1862.; [vii]-xlviii, "Introduction.," [xlix]-l, "Errata.," [1 pg], "Manuel | De | Minéralogie.," [1 pg], Blank.; [1]-6, "Incidences des Formes Appartenant au Système Régulier.," [7]-534, "Description des Espèces.," 535-555, "Supplément.," [556], Blank.; [557]-572, "Table Des Matières | Du Premier Volume."

[Vol 2] [i-ii], Half title page, "Manuel | De | Minéralogie | II.," verso "Paris—Imprimerie Arnous De Riviere et Ce, | ...," [iii-iv], Title page, verso blank.; [v]-viii, "Préface.," [ix]-xlvi, "Additions Et Modifications | Aux Descriptions Du Premier Volume.," [xlvii]-lii, "Additions | A L'Errata Du Premier Volume.," [liii]-liv, "Avant-Propos | Du Second Fascicule.," [lv]-lvii, "Supplément | A L'Errata Du Premier Volume.," [lviii], Blank.; [lix]-lx, "Errata | Du Second Volume.," [1]-528, Text.; [529]-544, "Table Des Matières."

[Atlas] Consists of 84 plates, numbered I-LXXXIV, printed on 42 leaves, and showing 514 figures.

PLATES: The forty plates contained in the text volumes consist of stereo net projections of various crystal forms of the mineral species. None are signed. The unsigned plates of the atlas are numbered I-LXXXIV. The first shows a polarizing microscope and crystal diagrams, while the remaining plates illustrate crystal drawings of various mineral species described within the text. The plates of the atlas are printed on both sides of the leave.

RARE. An ambitious work that attempts to give a comprehensive view of the internal structure of minerals through the use of optical properties. Des Cloizeaux was an expert practitioner in mineral optics, and his original plan had been a simple translation of HENRY JAMES BROOKE and WILLIAM HALLOWES MILLER's edition of WILLIAM PHILLIP'S *An Elementary Introduction to Mineralogy* (6th ed., London, 1852). However the project grew much more complex as Des Cloizeaux augmented the text with his own copious observations on the crystallography and optical characteristics of the species. A large portion of this augmentation involved his attempt to firmly establish the optical properties for all known crystalizing minerals. Although the task was too large for him alone to complete, he was able to assemble parameters for over 500 substances, or about half of the mineral species known at the time. In the process, he was conclusively able to show some supposed species to be mere varieties and to discredit many other minerals as identical to species previously described. This research is included in mineralogical descriptions of the *Manuel de Minéralogie*. For a period, Des Cloizeaux's adoption of the crystallographic notation invented by RENÉ JUST HAÛY and enlarged by ARMAND LÉVY was copied in other French crystallographic works; however, Miller's notation eventually prevailed. Although the

DESNOS

author worked on this book for over thirty-five years, this book was never totally completed, with only the two volumes described being published. He was among the first investigators to recognize the utility of the polarizing microscope for mineral analysis.

Fasciles: Contributing to this work's scarcity is the fact that it was issued in fascicles. The following list provides the sequence.

Vol. 1, 572 pp., 1862.

Vol. 2, Fascile 1, 208 pp., 1874.

Vol. 2, Fascile 2, pp. 209-544, 1874/93.

REFERENCES: Dana's 7th (Bibliography): 69. • NUC: 140, 293.

1329. — French, 1867.

Nouvelles Recherches sur les Propriétés Optique des Cristaux, Naturels ou Artificiels, et sur les Variations que ces Propriétés éprouvent sous, Influence de la Chaleur. Paris, 1867.

4°: [3], [1], 222 p., illus., tables.

VERY SCARCE. This is the last and most comprehensive work in a series of studies Des Cloizeaux published concerning the effect of heat on natural and artificial crystalline bodies. He discovered that sustained heating at a certain temperature would permanently alter the positions of the optic axes of certain crystals (notably the orthoclase minerals), thereby giving the geologist a method to determine if a certain rock had been subjected to high temperature deformation. It was published as, *Institute Impérial de France, Mémoires*, vol. 18.

REFERENCES: Dana's 7th (Bibliography): 69. • DSB: 4, 66. • Groth, *Entwicklungsgeschichte*, 1926: p. 178. • NUC: 140, 293 [ND 0194380].



DES FONTAINES

DES FONTAINES, Swebach (René Louiche). (BORN: Tremblay, Département Ile-et-Vilaine, France, 14 February 1750; DIED: Paris, France, 16 November 1833) *French mineralogist.*

Des Fontaines was a member of the scientific academy at Metz.

MANUEL CRISTALLOGRAPHE,

OU

ABRÉGÉ DE LA CRISTALLOGRAPHIE

DE M. ROMÉ DE L'ISLE.

Avec une méthode facile pour connoître les différentes cristallisations des mixtes, qui composent un cabinet de minéralogie, aidé par une collection de Polyèdres dont cet ouvrage est aussi une explication.

PAR M. SWEbach DES FONTAINES, Agrégé à l'Académie des Sciences de Metz.



A PARIS,

Chez BOSSANGE et Compagnie, Libraires, rue des Noyers.

1792.

MANUEL CRISTALLOGRAPHIE, 1792

REFERENCES: *Catalogue of Portraits of Naturalists*: 357 [3 portraits listed]. • Poggendorff: 1, col. 559 & 1557.

1330. — French, 1792.

Manuel | Cristallographie, | Ou | Abrégé De La Cristallographie | De M. Romé De L'Isle. | Avec une méthode facile pour connoître | les différentes cristallisations des | mixtes qui composent un cabinet de | minéralogie, aidé par une collection | de Polyèdre dont cet ouvrage est | aussi une explication | Par M. Swebach des Fontaines, Agrégé à | l'Académie des Sciences de Metz. | [ornament] | A Paris, | Chez Bossange et Compagnie, Libraires, | rue des Noyers. | [double rule] | 1792.

8°: [2], v-viii, [1]-74 p., one plate, folding map.

RARE. In this *Manual of Crystallography*, the author has abridged the science as set out by Romé de l'Isle's in his *Cristallographie* (2nd ed., 4 vols., Paris, 1783). Des Fontaines has developed in the text an easy method to determine a mineral's system of crystallization so that collectors could organize their cabinets based upon crystallography.

REFERENCES: BL: [726.c.23.]. • LKG: IX 18. • NUC: [no copy listed].

DESNOS, Joseph Jacques Odolant.

See: Odolant-desnos, Joseph Jacques.

DESVAUX, Nicaise Auguste. (BORN: 28 August 1784; DIED: 12 July 1856) *French botanist.*

REFERENCES: Internet search. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88.

1331. — French, 1805.

Tableau Synoptique | Des Minéraux, | Par Classes, Ordres, Genres Espèces, Variétés, Sous- | variétés, d'après la méthode et la nomenclature d'Hauy; | augmenté des objets découverts depuis l'impression de | l'ouvrage de ce Savant. | La Tableau est précédé d'une Terminologie, où l'on trouvera | l'explication des termes employés dans le cours de l'Ouvrage, | et des Observations sur les différentes théories des Volcans, | particulièrement sur celle de Patrin. | Par A. Desvaux, | Membre de la Société d'Emulation de Poitiers. | [wavy rule] | Nisi utile est quod facimus, nulla est gloria. | Fab. Phæd. lib. 3. | [wavy rule] | A Paris, | Chez F.V. Guilleminet jeune, Libraire, rue des Fossés-Montmartre, | près la Banque de France, n.º 3. | A Poitiers, | Chez E.-P.-J. Catineau, Imprimeur-Libraire. | An XIII — 1805.

4º: lix, [54], 174 p.

VERY RARE. This work, a description of Hauy's system in the form of a table, is an excellent introduction to the different technical terms and the various terminologies used in mineralogy. Also included are observations concerning the different theories about volcanoes.

REFERENCES: BL: [7108.d.9.]. • Leonard's *Taschenbuch*: 1, p. 323. • LKG: XII 167. • NUC: [no copy listed].

1332. — French, 1843.

Minéralogie | Méthodique | Du | Département De La Loire-Inférieure, | Par M. Desvaux, Directeur en roraitte du Musée d'Histoire Naturelle d'Angers. | [ornate rule] | Nantes, | Imprimerie De Camille Mellinet. | [rule] | 1843.

8º: 111 p.

RARE. A topographical mineralogy describing the species found in the region of Loire-Inférieure in north-west France.

REFERENCES: BL: [7108.d.11.]. • NUC: [no copy listed].

DEVÈZE DE CHABRIOL, J.S.

1333. — French, 1827.

Essai géologique et minéralogique sur les environs d'Issoire, département du Puy-de-Dôme, et principalement sur la Montagne de Boulade, avec la description et les figures lithographiées des ossements fossiles qui y ont été recueillis; par J.S. Devèze de Chabriol ... J.B. Bouillet ... Clermont-Ferrand, Thibaud-Landriot [etc.] 1827.

2º: xii, 104 p., 29 plates (one colored), one colored geological map. Published in five livraisons.

VERY SCARCE. Co-authored with Jean Baptiste Bouillet [1799-1878].

Geology – France – Puy-de-Dôme. Paleontology – France – Puy-de-Dôme.

Jean Baptiste Bouillet. (BORN: 1799; DIED: 1878) *French geologist & mineralogist.* Bouillet was a banker at Clermont-Ferrand who self studied the geology and mineralogy around his city.

REFERENCES: BL: [442.k.19.]. • BMC: 1, 449. (Bouillet) Poggendorff: 1, col. 255.

DEWALQUE, Gilles Joseph Gustave. (BORN: Stavelot, Belgium, 2 December 1826; DIED: Liège, Belgium, November 1905) *Belgian physician, mineralogist & geologist.*

From 1850, Dewalque was a professor of physics and chemistry at the University of Liège. In 1855, he was appointed as the conservator of the mineral cabinet. In 1857 he became professor extraordinary and in 1865 professor ordinary in mineralogy and geology at Liège University. He authored over 400 publications on different facets of Belgian geology. In 1870 Dewalque was elected the president of the Belgium Academy of Science.

REFERENCES: ABF: II 216, 257. • BAB: 186, 139-213. • *Bollettino della Società Geologica Italiana Roma*: 25 (1906), p. xlv-xlvi. • Firket, Adolphe, "Manifestation en l'honneur de M. Dewalque", *Annales de la Société Géologique de Belge*, 10 (1883), p. cxcix-ccvii. • *Geological Magazine*: 43 (1906), no. 1, 48. • Lohest, Max, "Notice sur Gustave Dewalque", *Annales de la Société Géologique de Belge*, 38 (1911), p. B77-B158, portrait. Reprinted in *Académie royale des sciences, des lettres et des beaux-arts de Belgique*, 77 (1911), 53-103, portrait. • Poggendorff: 3, 357, 4, 324-5 & 5, 287. • *Proceedings of the Geological Society, London*: 1905-1906, lvi-lvii. • Sarjeant, *Geologists*, 1980: 2, 897. • Soreil, Gustave J., "Manifestation en l'honneur de M.G. Dewalque", *Annales de la Société Géologique de Belge*, 26 (1899), p. cxxii-cxxviii, frontispiece (portrait). • WBI.

1334. Dissertation, 1862: Atlas de Crystallographie. Paris, 1862.

8º: 16 p., 18 plates (numbered I-XVIII). Description du Lias de la Province de Luxembourg. Inaugural Dissertation. Rare.

REFERENCES: NUC.

1335. — French, 1884 [Bibliography].

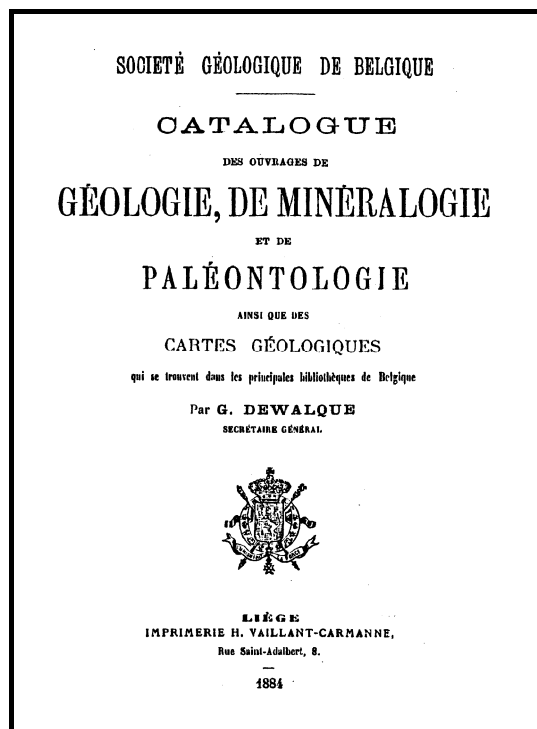
Société Géologique De Belgique | [rule] | Catalogue | Des Ouvrages De | Géologie, De Minéralogie | Et De | Paléontologie | Ainsi Que Des | Cartes Géologiques | qui se trouvent dans les principales bibliothèques de Belgique | Par G. Dewalque | Secrétaire Général | [ornament] | Liège | Imprimerie H. Vaillant-Carmanne, | Rue Saint-Adalbert, 8. | [short rule] | 1884.

8º: [i]-xii, [2], [1]-394 p.

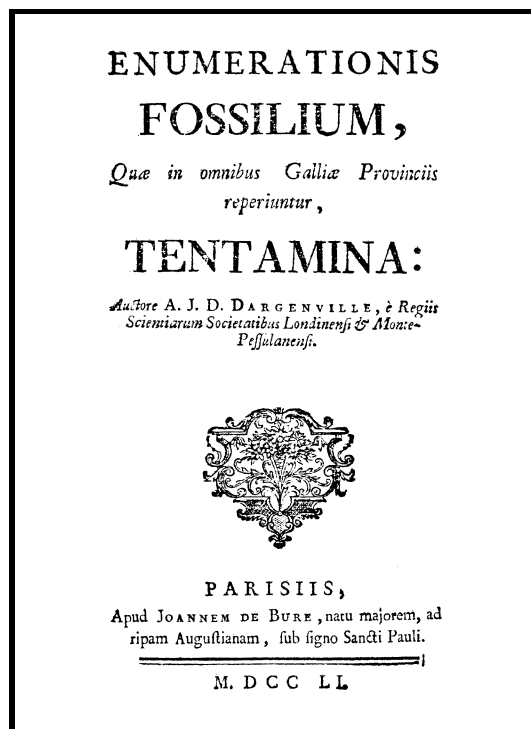
CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-xii, "Avertissement.;" [1 pg], Liste Des Abréviations.;" [1 pg], Blank.; [1]-394, Text.

VERY SCARCE. This important 19th century catalog of geology, mineralogy and palaeontology books lists over 3,300 items relative to the geology of Belgium and adjacent areas in France. There is included an extensive alphabetical index.

REFERENCES: BL: [11903.aa.16.]. • Margerie, *Bibliographies Géologiques*, 1896: no. 1061. • NUC: ??, ??.



CATALOGUE, 1884



ENUMERATIONIS FOSSILUM, 1751

DEZALLIER D'ARGENVILLE, Antoine Joseph. (BORN: Paris, France, 4 July 1680; DIED: Paris, France, 29 November 1765) *French naturalist.*

Dezallier was born the son of a prosperous Paris bookseller. He studied at the Collège du Plessis, and from 1713 to '16 in Italy. After his return to France, he purchased the post of secretary to the King, and became Maître des Comptes in 1733 and counselor to the King in 1748. In 1716, he settled in Paris where he acquired a reputation as an expert collector of objects of art and curiosities of nature. Further travels to Germany, Holland, and England widened his circle of acquaintance and enlarged his collection of objects. Besides his works in natural history, D'Argenville is most well-known for his work on the life of artists, *Abregé de la Vie des plus Fameux Peintres* (Paris, 1745-52; 1762). Dezallier became member of the Société Royale des Sciences de Montpellier in 1740, of the Royal Society of London in 1750, and of the Académie de La Rochelle in 1758.

REFERENCES: ABF: I 305, 48-50; 318, 130-138. • *Biographie Universelle*: 11, 598-9. • DBF: 3, 581-3 [by E.-G. Ledos]. • De Ratte, A., "Eloge de M. Desallier d'Argenville" (pp. ix-xxiv), in: Dezallier d'Argenville, A.J., *La Conchyliologie*. Third edition. Paris, 1780. • DSB: 1, 243-4 [by Y. Laisus]. • Feller, *Biographie Universelle*, 1851. • Lambrecht & Quenstedt, *Catalogus*, 1938: 13. • *Nouvelle Biographie Générale* (Hoefer): 14, 10-1. • Poggendorff: 1, col. 566. • Sarjeant, *Geologists*, 1980: 2, 898. • WBI.

1336. — Latin, 1751.

Enumerationis | Fossilium, | Quæ in omnibus
Galiæ Provinciis | reperiuntur, | Tentamina: |
Auctore A. J. D. Dargenville, è Regiis | Scientiarum
Societatibus Londinensi & Monte- | Pessulanensi.
| [ornament] | Parisiis, | Apud Joannem de Bure,

natu majorem, ad | ripam Augustianam, sub signo
Sancti Pauli. | [double rule] | M. DCC LI.

8°: a⁴ A⁴ B-H⁸ I⁹ (A1 not signed, A2 signed A1, A3 signed A2, etc); 72ℓ.; [2], [j]-vii, 1-131, [3] p.

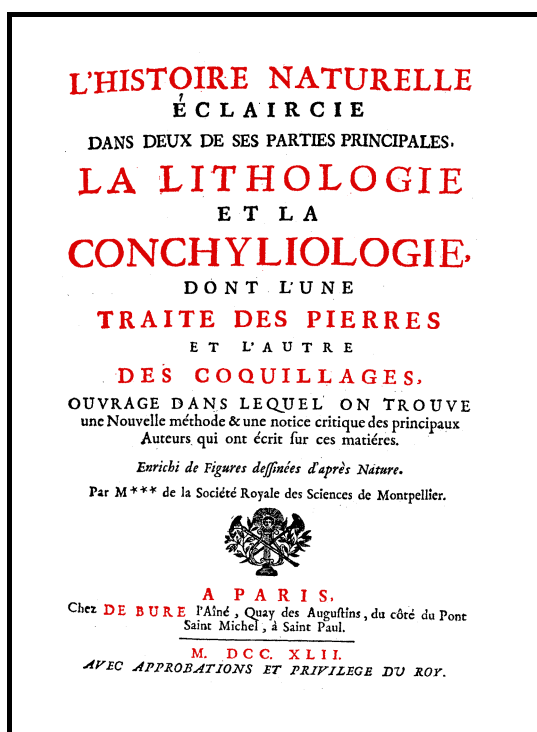
CONTENTS: [2 pgs], Title page, verso blank.; [j]-vii, "Proemium."; 1-131, Text.; [1 pg], "Approbation."; [2 pgs], "Tabula | Viginti Quatuor."

RARE. A province by province description of the fossils, stones and minerals in the ancient region of Galiae in France. This is one of the first works to systematically treat the fossils and minerals of that country. The author provides for each species listed the place of its origin and a description of its appearance.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 37. • Bork, *Palaeontology in France*, 1973. • *Freilich Sale Catalog*: no. 157. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 94. • Jonathan Hill, Bookseller: cat. 32, no. 56. • *Leipziger gelehrte Zeitung*: 1752, 258. • LKG: XIV 329. • Ward & Carozzi, *Geology Emerging*, 1984: no. 661.

1337. — French, 1742 [First edition].

[In red:] L'Histoire Naturelle | [in black:] Éclaircie
Dans Deux De Ses Parties Principales. | [in red:]
La Lithologie | [in black:] Et La | [in red:]
Conchyliologie, | [in black:] Dont L'Une | [in red:]
Traite Des Pierres | [in black:] Et L'Autre | [in red:]
Des Coquillages, | [in black:] Ouvrage Dans Lequel
On Trouve | une Nouvelle méthode & une notice
critique des principaux | Auteurs qui ont écrit sur
ces matières. | Enrichi de Figures dessinées d'après



L'HISTOIRE NATURELLE, 1742

Nature. | Par M * * * de la Société Royale des Sciences de Montpellier. | [ornament] | [in red:] A Paris, | [in black:] Chez [in red:] De Bure [in black:] l'Aîné, Quay des Augustins, du côté du Pont | Saint Michel, à Saint Paul. | [rule] | [in red:] M. DCC. XLII. | [in black:] Avec Approbations Et Privilege Du Roy.

4^o: a⁴ A-3Q⁴; 250ℓ.; [8], [1]-491, [1] p., frontispiece, 32 plates. Title page in red and black. PAGE SIZE: 288 x 210 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication to the Société Royale des Sciences.; [3 pgs], "...Approbation..."; [1 pg], "Avis Aux Relieurs Pour Placer." [=placement of plates in the text]; [1]-91, Text, "La | Lithologie."; [92], Blank.; 93-105, "Explication | De Plusieurs Termes."; [106], Blank.; [107], Sectional title page, "Seconde Partie. | Conchyliologie | Ou | Traité Général | Des Coquillages De Mer, | De Rivière Et De Terre, | Dans Lequel On Trouvera Une Nouvelle | méthode accompagnée de tables latines & françoises, pour | distribuer ces Coquillages suivant leurs caractères généraux dans les classes qui leur conviennent. | Avec | Des Remarques Sur Chacune De Leurs Familles, | des Figures en taille-douce des plus belles Coquilles dessinées d'après nature, avec leurs explications."; [108], Blank.; [109]-395, Text, "La | Conchyliologie."; [396], "On a cru faire plaisir au Public ..."; [397], "Table | Alphabétique."; 398-456, Text.; 457-491, "Table | Alphabétique | Des Matières | Contenus Dans Cet Ouvrage."; [1 pg], Additions Et Corrections."

PLATES: The 33 engraved plates show mineralogical and conchological subjects. All the plates indicate they were engraved by Chedel. The plates comprise: The frontispiece is signed Boucher, in Chedel sculptit., and

shows the god Neptune and various goddesses at the bottom of the sea. No. 2 (p. 47), Concretions. No. 3 (p. 71), Fossils and crystallizations. No. 4 (p. 83), Corals. No. 5 (p. 84), Corals. No. 6 (p. 240), Sand dollars. No. 7 (p. 245), Shells and teeth. No. 8 (p. 250), Nautalis shells. No. 9 to No. 33, Shells. Plates occur at pages 9/254, 10/258, 11/262, 12/268, 13/270, 14/276, 15/280, 16/285, 17/292, 18/294, 19/298, 20/304, 21/310, 22/316, 23/318, 24/324, 25/330, 26/334, 27/342, 28/348, 29/352, 30/364, 31/372, 32/383 and 33/392.

SCARCE. An important work on lithology and conchology, including discussions of the contributions of the chief authors on these subjects, and a method of classification for shells, as well as tables in Latin and French.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 1, 141. • Beckmann P.O.B.: 3, 497. • Beekman, *Systematische Mineralogie*, 1906: 87. • Berlinische Sammlungen: 3, 332. • BMC: 3, 1203. • Bork, *Palaeontology in France*, 1973. • Cobres, *Deliciae Cobresianae*, 1782: 425 ["Nützlich"]. • Edwards, *Early History of Palaeontology*, 1976: p. 34. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 31-2. • LKG: XII 22. • Metzger, *Genèse de la Science des Cristaux*, 1918: 61. • Schröter's *Journal für die Liebhaber*: 3, 1. • Ward & Carozzi, *Geology Emerging*, 1984: no. 659.

1338. 2nd edition, 1755: [In red:] L'Histoire Naturelle | [in black:] Eclaircie | Dans Une De Ses Parties Principales, | [in red:] L'Oryctologie, | [in black:] Qui | Traite Des Terres, | [in red:] Des Pierres, Des Métaux, | [in black:] Des Minéraux, | [in black:] Et | [in red:] Autres Fossiles, | [in black:] Ouvrage Dans Lequel On Trouve | une nouvelle méthode Latine & François de les diviser, & une | notice critique des principaux Ouvrages qui ont paru sur ces | matières. | Enrichi de Figures dessinées d'après Nature. | Par M * * * des Sociétés Royales des Sciences de Londres & de | Montpellier. | [ornament] | [in red:] A Paris, | [in black:] Chez [in red:] De Bure [in black:] l'Aîné, Quay des Augustins, du côté du Pont | Saint Michel, à Saint Paul. | [double rule] | [in red:] M. DCC. LV. | [in black:] Avec Approbations Et Privilege Du Roy.

4^o: a-c⁴ A-Z⁴ 2A-2Z⁴ 3A-3Z⁴ 4A⁴ 4B¹; 283ℓ.; [8], [i]-xvj, [1]-560, [2] p., engraved frontispiece, 25 engraved plates. Title page in red and black. PAGE SIZE: 286 x 212 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Dedication to The Royal Society of London.; [3 pgs], Approbation & Privilege Du Roy.—dated 4 May 1753.; [1 pg], "Avis Aux Relieurs Pour Placer | les Figures." [=placement of plates in text]; [1-2], Sectional title page, "L'Oryctologie | Divisée | En Trois Parties," verso blank.; [3], "Oryctologie. | Première Partie, | Contenant | Un Discours Préliminaire | Sur | L'Oryctologie; | ..."; [4], Blank.; [5]-112, Text, part 1.; [113], "Oryctologie, | Seconde Partie | Contenant | Les Fossiles | Naturels A La Terre, | ..."; [114], Blank.; [115]-316, Text, part 2.; [317], "Oryctologie, | Troisième Partie | Contenant | Les Fossiles | Étranger A La Terre; | ..."; [318], Blank.; [319]-536, Text, part 3.; [537]-560, "Table | Alphabétique | Des Matières | Contenus Dans Cet Ouvrage."; [1 pg], "Corrections Et Additions."; [1 pg], "Avertissement."

PLATES: The 26 engraved plates show mostly mineralogical subjects. The frontispiece was designed by Devermont and all plates indicate they were engraved by Chedel. Each of the plates has a description at the top, with a notation as to the subscriber that paid for the plate at the bottom. The plates comprise: Frontispiece, "L'Oryctologie," signed Devermont Del. Chedel Sc. It shows a goddess holding shells and coral with minerals and stones at her feet. No. 2 (p. 152), "Matrices des Pierres Fines," 10 figs. No. 3 (p. 164), "Cristaux," 5 figs. No. 4 (p. 168), "Agathers Et Jaspes Singuliers," figs. A-M. No. 5 (p. 170), "Dendrites," 30 figs. No. 6 (p. 208), "Cailloux d'Orient et Autres," 11 figs. No. 7 (p.

229), "Fossiles Et Coquilles Petrifiées," 7 figs. No. 8 (p. 233), "Pierres dites Figureés," 16 figs. No. 9 (p. 237), "Fossiles," 5 figs. No. 10 (p. 238), "Pierres Arborisées," 8 figs. No. 11 (p. 239), "Pierres Arborisées," 4 figs. No. 12 (p. 242), "Congelations," 4 figs. No. 13 (p. 306), "Pierres Martiales, Marcassites, Pyrites," 8 figs. No. 14 (p. 322), "Fluors, Congelations, Petrifications," 6 figs. No. 15 (p. 324), "Rocher e Corail Blanc," 1 fig. No. 16 (p. 325), "Tessons," 2 figs. No. 17 (p. 330), "Parties du Corps Humain Petrifiées," 3 figs. No. 18 (p. 339), "Animaux et quelques unes de leurs Parties petrifier," 11 figs. No. 19 (p. 343), "Fossiles, dont les Analogues marins sont inconnus," 14 figs. No. 20 (p. 355), "Bois Petrifiés," 5 figs. No. 21 (p. 360), "Ardoises Arborisées," 6 figs. No. 22 (p. 363), "Madrepores," 10 figs. No. 23 (p. 369), "Pierres Etoilées," 19 figs. No. 24 (p. 372), Madrepore," 1 fig. No. 25 (p. 533a), "Oyseaux qui n'ont jamais été graves," figs. A-D. No. 26 (p. 533b), "Poissons de l'Amerique," figs. A-D.

SCARCE. An impressive compilation of 18th century mineral knowledge. Dezallier's introduction provides a critical review of past authors and their books. This is followed by a précis of his mineralogical system that gives a tabular arrangement of minerals, stones and precious gems, that is immediately followed by a detailed discussion of the classification. Dezallier recognized three classes of minerals: Terres (earths), Pierres (stones), and all others. Within each, groupings are differentiated primarily by physical properties such as color, form, weight, etc. The author claims this method was new because it follows the natural and apparent qualities of the species it distributes; however, its principles were set forth by several predecessors, the earliest of whom was AGRICOLA. A final section provides an excellent and detailed account of the mineralogy of France. Accompanying and scattered throughout the text are 26 finely engraved plates. These illustrations that rank among the best natural history engravings of the 18th century show minerals, stones, fossils, coral, birds and fish.

L'Histoire Naturelle was first printed in 1742, in a single volume that dealt with both mineralogy and conchology; however, in later editions, these two subjects were split into individual books, revised and expanded, and issued as independent works. Therefore, the second, third and fourth editions of the volume concerning minerals and petrification's appeared respectively in this second edition of 1755, 1760 and 1775, and the part dealing with conchology had second and third editions in 1757 and 1780.

Another issue, 1760: *L'Histoire Naturelle éclaircie dans une de ses parties principales l'Oryctologie, ...* Paris, Chez de Bure, 1760. 4°: xvi, 560, [2] p., engraved frontispiece, 25 engraved plates. Title page in red and black.

3rd edition, 1775: *L'Histoire naturelle éclairci dans une de ses parties principales, l'Oryctologie, qui traite des terres, des pierres, des métaux, des minéraux et autres fossiles, ouvrage dans lequel on trouve une nouvelle méthode Latine une notice critique des principaux Ouvrages qui ont paru sur ces matieres.* Paris, Chez De Bure l'Aine, 1775. 4°: [10], xvi, 560, [2] p., engraved frontispiece, 25 engraved plates. [This edition apparently adds 10 pages of new preliminary material.]

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 87. • *Berlinische Sammlungen*: 3, 333. • BMC: 3, 1203. • Bork, *Palaeontology in France*, 1973. • Cobres, *Deliciæ Cobresianæ*, 1782: 686. • Dana's 7th (Bibliography): 65. • Edwards, *Early History of Palaeontology*, 1976: p. 34. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 32. • *Hamburgische Magazin*: 20, 319. • Hoover Collection: no. 264. • LKG: XII 23 & XIV 330a. • Metzger, *Genèse de la Science des Cristaux*, 1918: 61. • Schröter's *Journal für die Liebhaber*: 3, 1. • Sinkankas, *Gemology Bibliography*, 1993: no. 1680. • St. Clair, *Classification of Minerals*, 1966: 78-80. • Ward & Carozzi, *Geology Emerging*, 1984: no. 660.

1339. — French, 1775 [3rd edition].

L'Histoire naturelle éclairci dans une de ses parties

principales, l'Oryctologie, qui traite des terres, des pierres, des métaux, des minéraux et autres fossiles, ouvrage dans lequel on trouve une nouvelle methode Latine une notice critique des principaux Ouvrages qui ont paru sur ces matieres. Paris, Chez De Bure l'Aine, 1775.

4°: [10], xvi, 560, [2] p., engraved frontispiece, 25 engraved plates. VERY SCARCE.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: p. 87. • Bork, K.B., "The Geological Insights of Louis Bourguet (1678-1742)," *Journal of the Scientific Laboratories, Denison University*: 55 (1974), 49-77. • Cobres, *Deliciæ Cobresianæ*, 1782: pp. 135, 136, 415, 425 & 686. • Edwards, *Early History of Palaeontology*, 1976: p. 34. • Metzger, *Genèse de la Science des Cristaux*, 1918: p. 61.

DESCRIPTION DES GÎTES DE MINÉRAI, DES FORGES ET DES SALINES DES PYRÉNÉES,

SUIVIE D'OBSERVATIONS SUR LE FER MAZÉ
ET SUR LES MINES DES SARDES EN POITOU:

PAR M. le Baron DE DIETRICH, Secrétaire général des Suisses & Grisons, Membre de l'Académie Royale des Sciences, de la Société Royale de Göttingue & de celle des Curieux de la Nature de Berlin, Commissaire du Roi à la visite des Mines, des Bouches à feu & des Forêts du Royaume.

PREMIERE PARTIE.

A PARIS,

Chez { DIDOT, fils aîné, Libraire, rue Dauphine.
CUCHET, Libraire, rue & hôtel Serpente.
Et à Strasbourg, chez TREUTTEL, Libraire.

M. DCC. LXXXVI.

Avec Approbation & Privilège du Roi.

DESCRIPTION DES GÎTES DE MINÉRAI, 1786

DIETRICH, Baron de.

REFERENCES: Poggendorff: 1, col. 571.

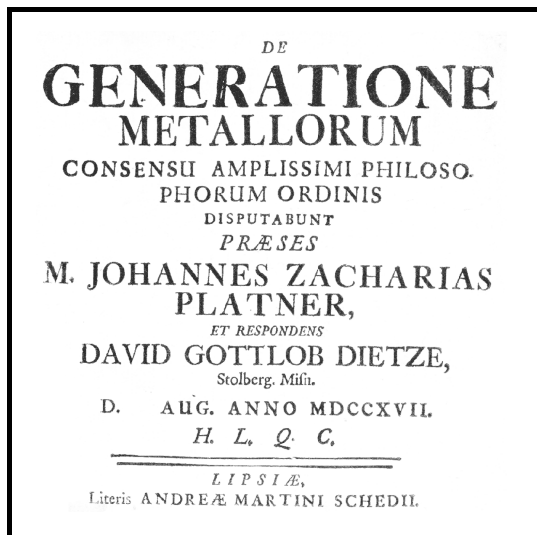
1340. — French, 1786.

Description | Des | Gîtes De Minéralai, | Des
Forges Et Des Salines | Des Pyrénées, | Suivie
D'Observations Sur Le Fer Mazé | Et Sur Les Mines
De Sardes En Poitou; | Par M. le Baron De Dietrich,
Secrétaire général des Suisses & | [...3 lines of titles
and memberships...] | [rule] | Premiere Partie. | [rule]
| A Paris, | [To left: Chez { [to right, two lines:]
Didot, fils aîné, Libraire, rue Dauphine. | Chuchet,
Libraire, rue & hôtel Serpente. | Et à Strasbourg,

chez Treuttel, Libraire. | [double rule] | M. DCC.
LXXXVI. | Avec Approbation & Privilège du Roi.
2 vols. With colored plates.

RARE. This topographical mineralogical work provides descriptions of the mines, smelters and saltworks located in the Pyrenees. Besides descriptions of iron refining, Baron de Dietrich includes descriptions of various minerals.

REFERENCES: BL. • NUC.



DE GENERATIONE METALLORUM, 1717

DIETZE, David Gottlob. *German.*

1341. — Latin, 1717 [Dissertation].

De | Generatione | Metallorum | Consensu
Amplissimi Philoso- | phorum Ordinis |
Disputabunt | Præses | M. Johannes Zacharias |
Platner, | Et Respondens | David Gottlob Dietze,
| Stolberg. Misn. | D. Aug. Anno MDCCXVII.
| H.L.Q.C. | [double rule] | Lipsiæ, | Literis Andreae
Martini Schedii.

4°: 46, [2] p.

RARE. This dissertation on the origins of metals was presided over by Johannes Zacharias Platner and responded to by David Gottlob Dietze.

REFERENCES: BMC: 7, 320, 713. • Hoover Collection: no. 265. • LKG: XVI 73.

DILLNER, Georg Sebastian.

1342. — German, 1777 [Collection catalog].

Verzeichnis der von weil. S. T. Herrn Georg Sebastian Dillner, ... gesammelten Naturalien- und Kunstsachen ... Regensburg, Zunkel, 1777.

8°: 72 p. VERY SCARCE.

REFERENCES: BL: [no copy listed]. • Gatterer, *Mineralogischen Literatur*, 1798-9. • Wilson, *History of Mineral Collecting*, 1994: 168 & 210.



DIOSCORIDES

DIOSCORIDES, Pedacius. *Greek botanist.*

According to tradition, Dioscorides from the Greek city of Anazarbus, studied botany in Tarsus in Asia Minor. He appears to have been a physician to the Roman military, and had wide practical experience in pharmacy and medicine. He traveled extensively through the regions surrounding the Mediterranean. Around the year A.D. 65 he composed in Greek a treatise on medicinal substances that was to have a profound influence in the history of medicine. The treatise became the basis of subsequent books on materia medica for centuries. The treatise consisted of five books, to which two books (on poisonous plants and animals) was later added and falsely attributed to Dioscorides.

REFERENCES: *Catalogue of Portraits of Naturalists*: 365 [5 portraits listed]. • DSB: 4, ?? . • *Jewish Biographical Archive*: I 204, 39-41 / Barado, 24-25. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 5, col. 575. • Schaedler, *Biographisch Handwörterbuch*, 1891: 28. • WBI. • *World Who's Who in Science*: 463.

1343. — Latin, 1478 [First edition].

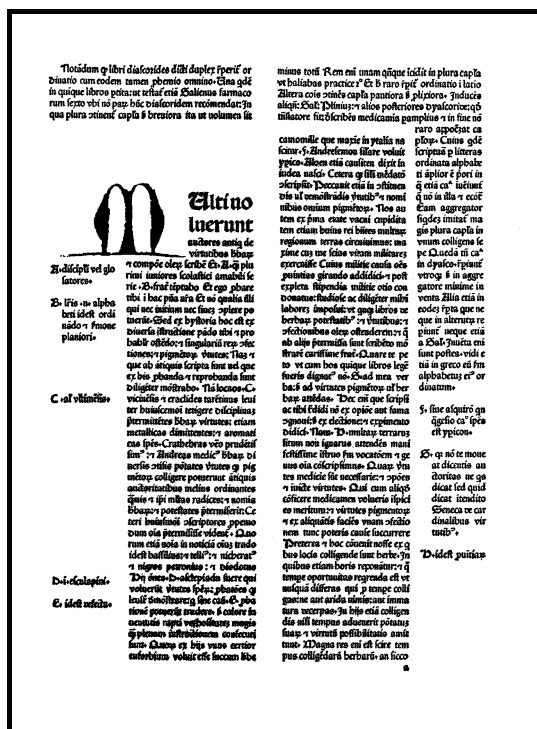
De Materia Medica ... Colle, Johannes de Medemblick, July 1478.

2°: a¹⁰ b-c⁸ d⁴ e⁸ f-g⁶ h⁸ A-B⁶ C-F⁸ [G]²; 104l.

Two column, Gothic character, 47 lines.

EDITIO PRINCEPS. Extremely rare. This is the most important classical work on medicines derived from animal, vegetable and mineral sources. Dioscorides, a Greek, lived in the age of Claudius and Nero about the middle of the first century. A botanist, military physician and pharmacologist of wide personal experience, he wrote in Greek an encyclopedia of *Materia Medica* in five books ((\times \emptyset \times)/ \times), which embodied all his knowledge of pharmacy and applied botany in a better arrangement and more completeness than earlier compilations. Dioscorides descriptions cover more than 600 plants, 35 animals and in Book V 90 minerals, with explanations on their pharmaceutical preparation and medical properties. This work remained authoritative for over fifteen centuries through numerous manuscript copies and Middle Age translations into Latin, Armenian and Arabic. Many of the preserved manuscript copies are

DIOSCORIDES



DE MATERIA MEDICA, 1478

richly illustrated with fine paintings of plants and other medical substances. Occasionally, especially in 13th-century Baghdad, manuscripts also included paintings of physicians preparing the medicinals. With the advent of printing it became a popular and standard desk reference for the physician and the laymen alike, with many different editions appearing to modern times. So many editions and issues in fact appeared that Dioscorides single work could be the subject of a substantial bibliography by itself.

Other editions & translations: Dioscorides who had always been a popular authority, was printed twice in the fifteenth century. The first of these appearances was the Latin editio princeps printed from the translation with commentary prepared by Peter of Abano [c1250-1316]. It was printed in 1478 by John of Medemblick at Colle di Val d'Elsa, located in the province of Siena about thirty miles south of Florence. This translation and commentary appeared again at Lyons in 1512, but subsequently were succeeded by two new Latin translations made directly from the Greek. These were published in 1516 in Venice and Paris, the first prepared by Ermolao Barbaro [1454-1495], who added a commentary entitled *Corollarium* and the second done by Jean Ruel [c1447-1537]. Between 1478 and 1600 there were thirty-six Latin commentaries involving ninety-six separate printings. During this same time, forty-three separate books were rendered in translation to the modern languages of Italian, French, German, Czech, Spanish, Dutch, English, and Arabic. The second appearance of Dioscorides during the incunabula period was a Greek edition published at Aldus press in July 1499. During the next century five more editions of the Greek text appeared. These statistics reflect only the direct impact. If the imitators of Dioscorides or those who based part of their work on his work are included,

hundreds of additional titles could be included.

REFERENCES: Arber, *Herbals, their Origin and Evolution*, 1986: p. 6-12. • BL. • BMC XV: VII 1078. • Dioscorides Pedanius, of Anazarbos, *The Greek herbal of Dioscorides, illustrated by a Byzantine*, A. D. 512; Englished by John Goodyer, A. D. 1655. Edited and first printed, A.D. 1933, by Robert T. Gunther. New York, Hafner Publishing Co., 1959. ix, 701 p., illus. [Translation of the *Materia Medica*]. • Goff: D-261. • Grube, E.J., "Materialien zum Dioskurides Arabicus," (pp. 163-194) in: *Aus der Welt der islamischen Kunst: Festschrift für Ernst Kühnel*. Berlin, Gebr. Mann, 1959. [Discusses the illustrated Arabic manuscripts of Dioscorides]. • GW: 8436. • Hain, *Repertorium Bibliographicum*, 1826-38: *6258. • IGI: 3492. • Klebs, *Incunabula Scientifica*, 1938: 342.1. • Norman, *100 Books Famous in Medicine*, 1995: no. 3. • Osler, *Incunabula Medica*, 1923: no. 161. • Pritzler, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2299. • Proctor, *Index*, 1898-1906: no. 7241. • Riddle, J.M., *Dioscorides on pharmacy and medicine*. Foreword by John Scarborough. Austin, University of Texas Press, 1985. xxviii, 298 p., illus. • Sadek, M.M., *The Arabic Materia Medica of Dioscorides*. Quebec, 1983. • Sarton, *Introduction*, 1928-52: 1, 258-60. • Sarton, *Scientific Incunabula*, 1938: [CHECK ON THIS]. • Singer, C., "The Herbal in Antiquity and its Transition to Later Ages," *Journal of Hellenic Studies*, 47 (1927), 1-25. • Stillwell (Science): 618.



INDEX LIBRORUM, 1512

1344. 19 March 1512, 1512: [In red:] **I** Index librorum in presenti volumine contentorum. | [D3]yoscoridis exactissimi indagatoris ... scriptoris virtutum simplicium medicinarum Liber cccccxcvii continens capitula: cum nonnullis additionibus Petri paaduanensis in margine libri notatis. Eiusdem Dyoscoridis de naturis & virtutibus aquarum tractatus vnus. | [In black, large woodcut showing the author presenting (or receiving) a book to a botanist seated in a throne and holding a flower. The scene set within a a columned terrace in a pastoral setting].

8°: A-B⁸ a-o⁸ p¹; 140ℓ.; [16], cxx, [3]ℓ. Title text in red above the a large woodcut in black. Gothic type, double column, commentary printed as shoulder notes. COLOPHON: Lugduni, Impressus per Gilbertum de Villiers expensis Bartholomei Trot, 1512

VERY RARE. Preface by Antoine de Toledo. Second edition of the translation in alphabetical order attributed to Constantinus Africanus, with the commentary of Petrus de Abano, used for the first printed edition of Dioscorides printed by Johannes de Medemblick in Colle di Val d'Elsa in 1478. Considering the overwhelming dominance over pre-Renaissance herbal writings of the Dioscoridean corpus of medicinal plants and "associative" classification of plants by similarities of form or medicinal application (cf. Grolier/Norman, pp. 18-19), it is surprising that Medemblick's edition and the Aldine edition (1499) were the only editions of the text to appear in the fifteenth century and that the first illustrated edition did not appear until 1543. The first Latin translation of Dioscorides, which followed his original non-alphabetic arrangement, is thought to date back to the sixth century or earlier. The present translation, ascribed in a 13th century Bamberg manuscript to Constantine the African (d. 1087) is a reworking of this early Latin version, with the entries rearranged in semi alphabetical order (by first letter only) and some material discarded, and with approximately a third of the text taken from other Latin, Greek and Arabic sources. Peter of Abano's glosses were added in the fourteenth century. This medieval translation was soon to be superseded by the Latin translations of Ermolao Barbaro and Jean Ruel, both first published in 1516, and both of which returned to the original Dioscoridean text, with its explicit rejection of alphabetical order as antithetical to the proper understanding of the particular qualities and applications of plants.

REFERENCES: Baudrier, *Bibliographie Lyonnaise*, 1895: 8, 422-4. • BM/STC French: p. 137. • NLM 16th Century Books (Durling): no. 1138. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2300.

1345. 1516: De medicinali materia libri quinque: De virulentis animalibus, et venenis cane rabioso, et eorum notis, ac remediis libri quattuor. Parisiis: In officina Henrici Stephani, 1516.

4°: [12], 157, [2]ℓ.

VERY SCARCE. The four books of the De venenis and De venenatis animalibus are called books 6-9 in the running titles. "Pedacio Dioscoridi adscripta": leaves 156v-157v. Based upon the Aldine Greek edition of 1499. The Notha are printed with the text. Master microform held by: GmC.

Ruel, Jean, 1474-1537

1346. 1518: Pedacii Dioscoridae Anazarbei De medica materia libri sex. Colophon: Florentiae: per haeredes P. Iuntae, 1518.

2°: [12]ℓ., 352 numb.ℓ., [6]ℓ.

VERY SCARCE. Printer's mark on verso of last leaf.

Vergilius, Marcellus, fl. 1518

1347. 1518: De materia medica libri sex. [Venice, 1518.]

8°: [11], 236, [1] p. VERY SCARCE.

1348. 1518: De materia medica libri sex. Venetiis, in aedibus Aldi et Andreae soceri- Colophon, 1518.

4°: VERY SCARCE.

1349. 1518: De medica materia libri sex. Florentiae: Per haeredes Philippi Juntae, 1518.

8°: [6], 352, [6]ℓ. VERY SCARCE.

1350. 1523: De medica materia: libri sex ... Florentiae: Per Haeredes Philippi Juntae, 1523.

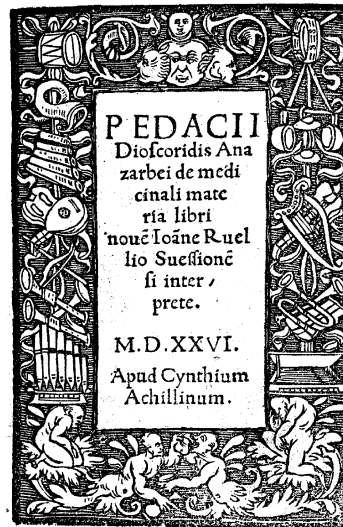
4°: [10], 352ℓ.

VERY SCARCE. The sixth book comprises the De venenis and the De venenatis animalibus, in other versions called books 6-9. The Notha are printed with the text. Master microform held by: GmC.

Vergilius, Marcellus, 1464-1521.

1351. 1523: De medica materia libri sex, interprete Marcello Virgilio. Cu ejusde annotationibus, nuperque diligetissime excusi. Florentiae, 1523.

2°: [10], 352ℓ. VERY SCARCE.



MEDICINALI MATERIA, 1526

1352. 1526: [Contained within a ornamental woodcut border being an array of musical instruments:] Pedacii | Dioscoridis Ana | zarbei de medi | cinali mate | ria libri nouē Ioāne Ruel | lio Suessionē | si inter- | prete. | M.D.XXVI. | Apud Cynthium | Achillinum.

8°: Woodcut title page and a woodcut printer's device at the end. PAGE SIZE: 146 x 106 mm.

RARE. Edited by Joannes Ruelle [??-?]. This is the second recension (first published 1516) of the text.

1353. 1527: De medicinali materia libri quinque: De virulentis animalibus, & venenis cane rabioso, eorum notis, ac remediis libri quatuor. Venetiis: Per Jo. Antonium et fratres de Sabio, 1527.

4°: [12], 212ℓ.

VERY SCARCE. The Notha are printed with the text. "Pedacio Dioscoridi adscripta": leaves 211-212. Master microform held by: DNLm.

Ruel, Jean, 1474-1537

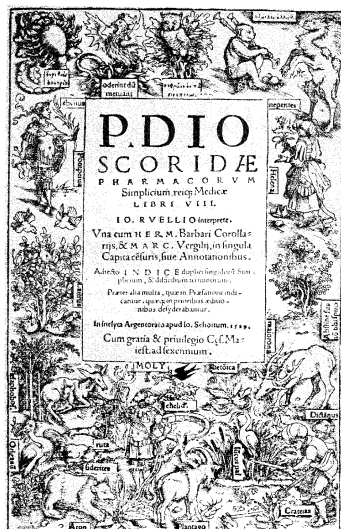
1354. 1529: [Contained within a highly illustrated woodcut border showing figures of birds, animals, plants and people:] P. Dio | scoridæ | Pharmacorum | Simplicium, reiqz Medicæ | Libri VIII. | Io. Rvellio interprete. | Vna cum Herm. Barbari Corolla= | rijs, & Marc. Vergilin, in singula | Capita cēsuris, siue Annotationibus. | Adiecto Indice duplici singulorū Sim- | plicium, & difficilium terminorum. | Præter alia multa, quæ in Præfatione indi- | cantur, quæ q3 in prioribus æditio- | nibus desyderabantur. | In inclyta Argentorato apud Io. Schottum. 1529. | Cum gratia & priuilegio Ces. Ma= | iest. ad sexennium.

2°: π⁴ a-z⁶ A-Z⁶ Aa-Nn⁶ Oo⁸ A-C⁴; 378ℓ.; [16], 361, [1]ℓ. Title in red and black. Woodcut border by Hans Weiditz.

VERY SCARCE. Esteemed edition, being the second edition with Ruellius' excellent translation. Historiated woodcut initials and fine title border by Hans Weiditz. Edited by Otto Brunfels. Cf. Dedication. Divided into 9 books, containing the De materia medica (Books 1-5), and the spurious De venenis (Book 6), De venenatis animalibus (Books 7-9) and the Notha (leaf [362]r). Includes index.

Barbaro, Ermolao, 1454-1493. / Brunfels, Otto,

DIOSCORIDES



PHARMACORVM, 1529

1488-1534. / Ruel, Jean, 1474-1537 / Vergilius, Marcellus, 1464-1521. / Schott, Johann, 1477-1548, printer.

REFERENCES: Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2304.

1355. 1529: De medica materia libri V.: De letalibus venenis, eorumque precautione & curatione. De cane rabido: Deque notis quae morsus ictusve animalium venenum relinquuntur sequuntur: deque eorum curatione lib. unus. Coloniae: Opera et impensa Ioannis Soteris, 1529 mense augusto.

2 parts in one volume. 2°: AA⁶ BB-CC⁴ a-z⁶ A-Z⁶ Aa-Rr⁶ [Rr⁶ blank]; ...1, a1-7 [=a8], b-n⁶.; ??ℓ.; [28], 753, [2] p.

VERY SCARCE. Author & title in Greek at head of title. Text in Greek & Latin. Bound with: Barbaro, E. In Dioscoridem corollariorum libri quinque. Cologne, 1530.

Vergilius, Marcellus, 1464-1521, ed. & tr.

Greek text with Latin translation and commentary by Marcellus Vergilius.

Cologne: Johannes Soter, August 1529

Marcello Vergilio, Latin trans. & comm. Dedicatory epistle by Johannes Soter.

First Edition of Barbaro's commentary. Dioscorides was a Greek physician who lived in the first century of the Christian era. He became a military surgeon under the Roman Emperor Nero and was a contemporary of Pliny. He wrote *De Materia Medica* (about 77 A.D.) which gave medicinal properties and some botanical information for about 600 plants. For about 1500 years, it was the supreme authority due to the practical nature of its contents, and it has been called the "most successful botanical textbook ever written." Dioscorides was believed to have had his medical training in Alexandria. He traveled widely and made observations on plants from the standpoint of their medical uses. He described roots, stems, leaves and sometimes flowers.. For centuries no drug plant was considered genuine unless it could be identified by the descriptions given by Dioscorides. "Ermolao Barbaro (1454N1493), Italian humanist scholar, was born at Venice on the 21st of May 1454. At an early age he was sent to Rome, where he studied under Pomponius Laetus. He completed his education at the university of Padua, where he was appointed professor of philosophy in 1477. "Ermolao Barbaro was a humanist of the first generation: not only did he translate several Greek texts into Latin imitating Cicero's prose, but also, before translating a text, he gathered as many manuscripts as possible to

check the text, avoiding the mistakes provoked by manual copying. At the same time, Barbaro commented on the classical texts of the *Naturalis Historia* by Pliny and the *De Materia Medica* by Dioscorides. Like his contemporaries, he compared the two works and noticed that they present similar data." Marcello Vergilio "There was extraordinary charm in this man's winning expression and cultivated speech and, when he was lecturing to his young pupils from the platform or speaking to a group of listeners, he displayed a wide learning remarkable from its very variety. Moreover, he served the state as Chancellor, an office which Aretino and Poggio had held before him, and, when he had the leisure, he was accustomed to devote it to a third occupation. For at the urgent request of the Medici he had undertaken to translate all Dioscorides and he hoped to win from this task no mean glory, since from early youth he had toiled with most painstaking industry at the very difficult subject of botany. " VD 16 D 1998 & B 349. Adams D655. Hoffmann I,600. Durling/NLM 1134 & 470. Wellcome I 1778. OCLC: 6440912+.See: Simon *Gastronomia* 52.

REFERENCES: NLM 16th Century Books (Durling): 1134, 470.

1356. 1529: De materia medica libri V. De letalibus venenis. Cologne, 1529.

2°; [28], 574 p. VERY SCARCE.

1357. 1532: Pedaii Dioscoridi Anazarbei Simplicium medicamentorum, rei; medicae | Libri VI. | Interprete Marcello Ver | Gilio Secretario | Florentino. | Quibus accessit, praeter pharmacorum simplicium | catalogum, nouus omnium sere medelarum | sine curationum index. | [ornament] | Basileae | 1532.

8°; [32], 684, [132] p.

RARE. Edited by Marcellus Vergilius [1464-1521]. Book six comprises the *De venenis* and the *De venenatis animalibus*. The *Notha* printed within brackets in the text.

REFERENCES: BM/STC *German*: p. 245. • NLM 16th Century Books (Durling): no. 1145. • Wellcome Catalog (Books): 1, 1795.

1358. 1537: De medica materia libri sex. Parisiis: Apud Simonem Colinaeum, 1537.

4°; [20], 246 (i.e., 266), [20]ℓ.

VERY SCARCE. "Variae aliquot in Dioscoride lectiones, e diversis exemplaribus collectae": leaves [6]-[10] (first group of paging) by Dionysius Corronius. "Notha et Dioscoridi falso adscripta": [20] l. at end. The sixth book comprises the *De venenis* and the *De venenatis animalibus*. Master microform held by: GmC.

Corronius, Dionysius. / Ruel, Jean, 1474-1537

1359. 1538: De medicinali materia libri quinque: De virulentis animalibus, & venenis, cane rabioso, eorum notis, ac remediis libri quatuor. Venetiis: Per Joan. Ant. de Nicolinis de Sabio, 1538.

4°; [12], 212, 60, [14] 1ℓ.

VERY SCARCE. "Pedacio Dioscoridi adscripta", leaves 211-212.

1360. 1538: De materia medica libri.vi Marcello Vergilio interprete. Quibus accessit, praeter pharmacorum simplicium catalogum, nouus...index Venice, (per D. Bernardinum Stagninum), 1538.

16°: 560ℓ. Woodcut device on title-page, repeated on sub-title (A1r).

VERY SCARCE. A scarce pocket edition of this classical work on medicine and pharmacy by Pedacius Dioscorides (fl. first century BC or first century AD). Of particular interest is book five which deals mostly with wine, a beverage Dioscorides greatly approves of, both for the cure of and the recuperation from many diseases.

Censimento CNC 17261; Durling 1147; Wellcome 1796; not in Adams; NUC locates only the copies at the National Library of Medicine and the University of Chicago.

1361. 1539: Anazarbei de medica materia. Basil, 1539.
8°:

VERY SCARCE. Translated by J. Ruellio.

REFERENCES: LKG: III 5.

1362. 1542: Pedanii Dioscoridis Anazarbei De medica materia libri sex. Basileae, Apud Mich. Ising., 1542.

8°: [40], 479, [145] p., illus.

VERY SCARCE. De medica materia libri sex. Translation of: Peri hyles iatrikes. Signatures: a-b8 c4 A-2Q8. "Notha et Dioscoridi falso adscripta": p. [1]-[40] at end. Includes index.

Ruel, Jean, 1474-1537.

1363. Francoforti edition, 1543: Pedanii Dioscoridis Anazarbei De medicinali materia libri sex Ioanne Ruellio Suesionii interprete ... ; additis etiam annotationibus sive scholiis brevissimis quidem, quae tamen de medicinali materia omnem controversiam facile tollant per Gualtherum H. Ryff ... ; accessere in eundem autorem Schola nova, cum nomenclaturis Graecis, Latinis, Hebraicis, & Germanicis, Ioanne Lonicero autore ... Francoforti, Apud Chr. Egenolphum, [1543].

2°: a-b⁶ A-Nn⁶ O⁴ α⁶ β⁴ A-O⁶ P⁴; ??ℓ.; [24], 439, [1] p., [10], 87 leaves with 595 text woodcuts. Includes indexes.

VERY SCARCE. De medicinali materia. Scholia nova. Original title page wanting; title from NUC. The Scholia nova of Lonicerus has separate t.p. with imprint: Marburgi: Christianus AEgenolphus excudebat, 1543. Includes indexes. Extensive mis-paging. Signatures: a-b6 (a1 wanting), A6, B5, C-Z6 (R1 wanting), Aa-Nn6 (Dd1 unsigned, Hh3 wanting), Oo4, [alpha]6, [beta]4, A-O6, P3.

Ruel, Jean, 1474-1537. / Ryff, Walther Hermann, d. 1548. / Lonicerus, Johannes, 1499-1569. Scholia nova. / Dioscorides Pedanius, of Anazarbos. Medicinali materia.

Seltene, erste von Ryff herausgegebene Ausgabe, die Holzschnitte hauptsächlich aus dem Rösslinschen Kräuterbuch (Nissen)

VD16 D2004 - Benzing, Egenolff 202 - Nissen BBI 496 - Benzing, Ryff 133

1364. Lugduni edition, 1543: Pedanii Dioscoridis Anazarbei De Medica Materia Libri VI. Ioanne Ruellio interprete. Nunc primum studio cuiusdam | uiri doctissimi ad graecum exemplar re | cogniti: ac eadem opera in Iuniorum | gratiam uulgatis officinarum nominib. | passim aspersis. | Vnā cum duplici Indice, quorum pri- | mus quidem stirpium nomēclaturas | Dioscoridi: alter Seplasiariorum & | Herbarijs vsitatas continebit. | Lvgdvni, | Svbt Scvto Coloniensi. | M. D. XLIII.

12°: :a-b⁸ A-Z⁸ Aa-Ss⁸ Tt⁵; ??ℓ.; [32], 617, [49] p. COLOPHON(Tt5v): Lugduni, | Excudebant Io- | annes & Franci | scus Frellonii, | fratres. | 1543.

VERY SCARCE. Colophon: Lugduni, excudebant Ioannes & Franciscus Frellonii, fratres, 1543.

Ruellius, Joannes, editor.

"Notha et Dioscoridi falso adscripta": 48 p. at end. Master microform held by: GmC.

Ruel, Jean, 1474-1537

REFERENCES: Hunt Botanical Catalog: no. 50. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2306.

1365. 1544: Libri cinque della historia, & materia medicinale. Venetia, Nicolo de Bascarini, 1544.

8°: [28], 442, [1] p.

VERY SCARCE. The sixth book was added and the translation and the commentaries, revised and enlarged, were published in 1548 under title: Il Dioscoride dell'eccellente dottor medico m. P. Andrea Matthioli, co i suoi discorsi. Further revised and enlarged, the commentaries were published in Latin with the Latin translation of Dioscorides in 1554 under title: Commentarii in libros sex Pedacii Dioscoridis De medica materia; and in Italian with the Italian translation in 1555 under title: I discorsi nei sei libri della materia medicinale de Pedacio

Dioscoride. Master microform held by: GmC.

Mattioli, Pietro Andrea, 1500 -1577.

1366. 1546: De medica materia libri sex, Ioanne Ruellio ... interprete. His accessit, praeter pharmacorum simplicium catalogum, copiosus omnium ferme medelarum sive curationem index. Lugduni, Frellonii, 1546.

8°: [30], 543, [139] p.

VERY SCARCE. "Notha et Dioscoridi falso adscripta": p. [544-586]

Ruel, Jean, 1474-1537, tr.

1367. 1547: De Medica Materia Libri Sex...His Accessit, Praeter Pharmacorum simplicium catalogum, copiosus omniu(m) ferme medelarum sive curationum Index. Lyon: Jean Frellon, 1547.

Small 8° (often described as 12°): [4], 543, [150] p. Frellon crab device on the title page, decorated initials.

VERY SCARCE. Jean de la Ruelle, trans.

"Ruelle was one of the earliest French botanists...He was of importance especially for this translation of Dioscorides." [Hunt] "If to have written the most serviceable book of botany that the world of learning knew of during sixteen centuries were the best title to botanical greatness, to Dioscorides would readily be concurred the absolute supremacy over all other botanists, not only of antiquity but for all time...One may fairly say that the greater part of all the new botanical matter published during the whole of the 16th century, and a part of the 17th, came out in the form of annotations upon the text of Dioscorides." [E. L. Greene as quoted in Hunt]

Hoffmann I,603. Schweiger, Greek,102. Baudrier V,211(also inc. at end.) Wellcome I,1786. Pritzel 236.

1368. 1549: Dioscoridis libri octo Graece et Latine: Castigationes in eosdem libros. Parisiis, Impensis A. Birkmanni, 1549.

8°: 392ℓ.

VERY SCARCE. Master microform held by: GmC.

Goupyl, Jacques, ca. 1525-1564.

1369. 1549: Dioscoridis libri octo Graece et Latine: Castigationes in eosdem libros. Parisiis: Impensis viduae Arnoldi Birkmanni, 1549.

4°: 22 p.ℓ., 392 numb.ℓ., 1ℓ. Birkmann's device on title-page; parallel columns of Greek and Latin text.

VERY SCARCE. Bound in brown leather; stamped in gold and blind; all edges speckled. Title-page damaged, affecting printer's mark. Colophon: Excudebat Benedictvs Prevost in vico Frementello, svb signo Stellae Avreae, mense avgvsto, 1549. Publisher's device on t.-p. Edited by Jacques Goupyl; the Latin translation (printed in parallel columns with the Greek) is by Jean Ruel.

An excellent edition by Jacques Goupyl, the Greek text being accompanied by Ruel's Latin translation.

Durling 1136; Hoffman I, 600-601 - 'correct u. sehr geschätzt'.

1370. 1549: Libri octo graece et latine: Castigationes in eosdem libros. Parisii, Impensis viduae Arnoldi Birkmanni, 1549.

8°: [20] 392ℓ. VERY SCARCE.

1371. 1549: Pedanii Dioscoridis Anazarbei, De medica materia libri sex. Accesserunt priori editioni Valerii Cordi ... Eu Franc: Apud Chr. Egenolphum, [April, 1549].

2°: [40], 554, [2] p., printer's device on verso of final leaf and 786 woodcuts. PAGE SIZE: 318 x 200 mm.

VERY SCARCE. De medica materia libri sex. Includes index.

Cordus, Euricius, 1484-1535. / Cordus, Valerius, 1515-1544. / Ruel, Jean, 1474-1537.

Second Ryff edition of the greatest botanico-pharmacological work of antiquity, containing the first printing of Valerius Cordus' important commentary, his father's, Euricius Cordus's, Iudicium de herbis et simplicibus, and Gessner's Herbarum nomenclaturae. Dioscorides' book served as a basis and inspiration for Western botanists, whose commentaries and observations often amplified,

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qualified, or sometimes opposed Dioscorides' teachings. 'Until well into the seventeenth century ... all botanical studies were based on this book, and the greater part of any new botanical matter published in the sixteenth and seventeenth centuries was in the form of a commentary on Dioscorides' (Printing and the mind of man). Already in 1543 (the same printer; 595 woodcuts) Ryff had edited Jean Ruel's standard translation (first, 1516), which was considered the most reliable over the following four centuries, together with commentaries by Lonicer, and Ryff himself. Valerius Cordus 'had wrought out more results than had his older contemporaries Brunfels, Tragus, and Fuchs combined. In his repeated journeyings to the great forests and wildest mountain districts, it is estimated that he discovered several hundred new plants ... Cordus took his degree in medicine at the University of Wittenberg [1531], and there shortly after gave regular lectures on Dioscorides, and with such marked acceptance that to the audience of medical students certain professors joined themselves ... The Annotations on Dioscorides [pp 449-533], being a kind of abstract of his Wittenberg lectures, were not published until five years after his death [in 1544], and were never prepared for the press by Cordus himself; perhaps not even so much as once written down by him at any time, for the printer's copy, when it came to the printing, consisted of the notes of a student who had been his auditor, whose notebook was found available' (Greene, Landmarks of Botanical Science p 370). In these Wittenberg lecture notes Cordus adds many details to Dioscorides' descriptions, distinguishes between variants and their different habitats, and points out errors in the ancient botanical and pharmacological literature, frequently referring to his own, and sometimes to his father's observations. Having discovered and described many species for the first time in the *Historia plantarum*, of which the first four books seem to have been completed by 1540 (printed first in 1561), Greene calls Cordus 'the first in all history to have formulated for himself a definitive plan or model of botanical description ... The boldest innovation that was made by any botanist of the whole sixteenth century, in whatever part of Europe, was that of Valerius Cordus when he proceeded to describe anew, and according to his own phyto-graphic scheme, some of the best-known and even best-described plants of Dioscorides' (pp. 375-6). In 1534 Valerius' father, Euricius, had published the 'Botanologicon, [which] is generally considered to be the first attempt at a scientific systematization of plants' (DSB). The index of this groundbreaking work is printed here, on pages 534 to 541, for the first time. Gessner's *Nomenclature* (starting on p 541) clarifies obscure plant names used by Dioscorides by giving their synonyms used in other texts. 'Gessner's appendix *Herbarum nomenclaturae* which contained names of plants according to Dioscorides was added because ... [Dioscorides' work] had by then become known as a botanical reference work' (Wellisch). The majority of illustrations in this edition are taken from Rösslin's herbal; about 200 are from Fuchs. The depictions of kitchen and pharmaceutical utensils, foodstuffs and processed materia medica are modelled on those of sixteenth-century Regimens.

Adams D664; Benzing, Ryff, 134; Durling 1152; Heirs of Hippocrates 30; Nissen 496; Pritzel 2308; Staffeu & Cowan 1231; VD16 D2205; Wellcome 1788; Wellisch, Conrad Gessner, A Bio-Bibliography A 8.2; not in Hunt, or Johnston

1372. 1550: De medicinali materia, libri sex, Ioanne Ruellio Suessionensi interprete. Cuilibet capiti additae annotationes, eruditae & compendiariae, e selectiori medicorum promptuario. Lvgdvni, Apud Balthazarem Arnolletum, MDXXXXX.

8°: 16 p.ℓ., 790 p., illus.

VERY SCARCE. At head of title" Pedanii Dioscoridis Anazarbei. Title vignette; initials; manuscript notes.

1373. 1550: De medicinali materia, libri sex. Lugduni: Apud Balthazarem Arnolletum, 1550.

4°: [32], 790 p., illus.

VERY SCARCE. The sixth book comprises the De venenis and the De venenatis animalibus. The Notha are wanting. Master microform held by: GmC.

Ruel, Jean, 1474-1537

1374. 1550: De medica materia libri vi: his accessit praeter pharmacorum simplicium catalogum, iopiosus omnium ferme medelarum sive curationum index. Venetiis: Dominicus Lilius excudebat, 1550.

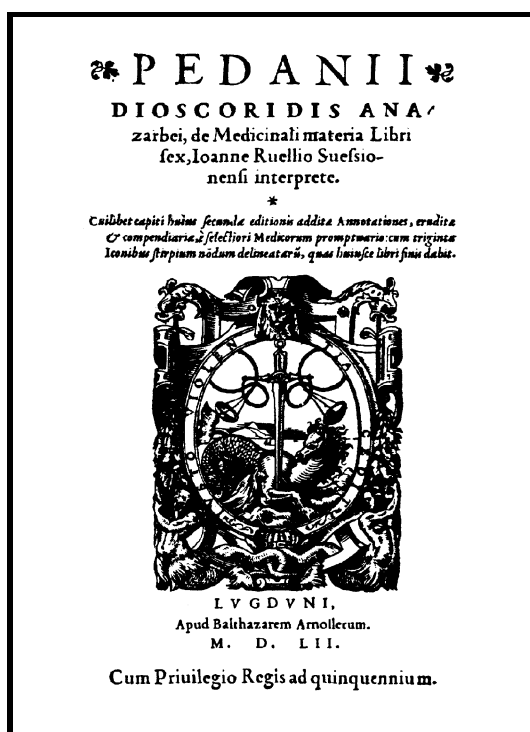
4°: 274, [90] p. VERY SCARCE.

1375. 1550: De medica materia libri sex. Venetiis: Dominicus Lilius, 1550.

4°: 274, [90]ℓ.

VERY SCARCE. The sixth book comprises the De venenis and the De venenatis animalibus. "Notha et Dioscoridi falso adscripta": verso of leaf 274-leaf [21].

Ruel, Jean, 1474-1537



DE MEDICINALI MATERIA, 1552

1376. 1552: [Ornament] Pedanii [ornament] | Dioscoridis Ana- | zarbei, de Medicinali materia Libri | sex, Ioanne Ruellio Suessio- | nensi interprete. | * | Cuilibet capiti huius secundae editionis additae Annotationes eruditae | & compendiariae, e selectiori Medicorum promptuario: cum triginta | Iconibus stirpium nondum delineatarū, quas huiusce libri finis dabit. | [vignette] | Lvgdvni, | Apud Balthazarem Arnolletum. | M. D. LII. | Cum Priuilegio Regis quinquennium.

8°: aa-bb⁸ a-z⁸ A-Z⁸ Aa-Cc⁸ Dd⁴ Ee⁸ (Dd⁴ blank); 420ℓ.; [32], 790, [2, blank], [16] p., with printer's device on title and c555 woodcuts in the text PAGE SIZE: 167 x 104 mm.

VERY SCARCE. Second Arnoullet edition (first 1550) to which is added 8 leaves figuring 30 plants not illustrated in the 1550 edition. These cuts derive from Dalechamps.

De medica materia libri sex. Translation of: Peri hyles iatrikes. Signatures: aa-bb⁸, A-3C⁸, 3D⁴. Includes

indexes. Colophon on p. 790: Excudebat Viennae Balthazar Arnoullet. Extensive notation in margins. Woodcut vignettes of plants by Clement Boussy, part of a series first used in Arnoullet's 1549 ed. of L. Fuchs's *De historia stirpium commentarii insignes*; cuts of animals in bk. 2 from Arnoullet's 1549 ed. of B. Aneau's *Decades de la description ... des animaux*. Pages [2-16] at end contain the thirty additional cuts, from the work of J. Dalechamps.

Nissen BBI, 499; Durling (Supplement) 57; Baudrier X, p. 130.

Colophon: Excudebat Viennae Balthazar Arnoullet. Printer's device on title page.

Ruel, Jean, 1474-1537. translator.

REFERENCES: Baudrier, *Bibliographie Lyonnaise*, 1895: 10, p. 130. • Mortimer *French Books*: no. 176. • Nissen (BBI): no. 499. • NLM 16th Century Books, Supplement: 57.

1377. 1554: De medica materia libri sex. Lugduni: Apud Iacobum Faure, 1554.

8°: [4], 543, [157] p.

VERY SCARCE. The sixth book comprises the *De venenis* and the *De venenatis animalibus*. "Notha et Dioscoridi falso adscripta": p. [544-586]. Master microform held by: GmC.

Ruel, Jean, 1474-1537

1378. 1554: De materia medica libri sex. Lugduni: Apud Antonium Vincentium, 1554.

8°: [30], 564, [148] p.

VERY SCARCE. Colophon: Lugduni, Excudebat Balthazar Arnoulletus. The sixth book comprises the *De venenis* and the *De venenatis animalibus*. "Notha et Dioscoridi falso adscripta": p. [565-608]. Master microform held by: GmC.

Mattioli, Pietro Andrea, 1500 -1577. / Ruel, Jean, 1474-1537

1379. 1554: Pedanii Dioscoridis Anazarbei, De medica materia libri sex. Lugduni: Apud Iacobum Faure, 1554.

8°: [4], 543, [157] p.

VERY SCARCE. De medica materia libri sex.

Ruel, Jean, 1474-1537, tr.

1380. 1558: De materia medica libros quinqve: Amati Lvsitani ... enarrationes eruditissimae. Accesserunt huic operi praeter correstiones Lemmatum, etiam adnotationes R. Constantini, nec non simplicium picturae ex Leonharto Fuchsio, Iacobo Dalechampio, atque alijs. Lvgdvni: Apud Gulielmum Rouillium, 1558.

8°: [74], 807, [16] p., illus.

VERY SCARCE. Colophon: Lugduni, excudebat vidua Balthazaris Arnolleti. Woodcut printer's device and initial letters. 4th ed.; first pub. in Venice, 1553.

Amato, Lusitano, 1511-1568, commentator. / Constantin, Robert, 16th c., comp.

1381. 1561: [In hoc volumine continentur Valerii Cordi Simesusij Annotationes in Pedacij Dioscoridis. Anazarbei De medica materia Libros V: Longe aliae quam ante hac sunt evulgatae: ejusdem ... Historiae stirpium Lib. IIII posthumi, nunc primum in Lucem editi, adiectis etiam stirpium iconibus, & brevissimus annotatiunculis: Sylva, qua rerum fossilium in Germanium plurimarum metallorum, Lapidum, & stirpium aliquot rariorum notitiam brevissime persequitur nunquam hactenus visa: De artificiosis extractionibus Liber: Compositiones medicinales aliquot, non vulgares: his accedunt Storck-Hornii et Nessi In Bernatium Helvetiorum ditone monitum, & nascentium in eis stirpium descriptio Benedict Aretii: item Conradi Gesneri De hortus Germaniae, Liber recens Argentorati: excvdiat Iosias Rihelius, 1561.

2°: [8], 301, [8]ℓ., illus.

VERY SCARCE. Annotationes in Pedacij Dioscoridis De medica materia. Libros V. De medica materia. Historiae stirpium. Sylva. De artificiosis extractionibus. Compositiones medicinales aliquot, non vulgares. Storck-Hornii et Nessi in Bernatium Helvetiorum ditone monitum.

De hortis Germanae. Original title page and three prelim. Leaves wanting: title from micro-opaque ed. published by Readex Microprint, 1980. Includes index. Signatures: a4(wanting), b4, A-O6, P -Z4, Aa-Zz4 (Zz4 blank), AA6.

Cordus, Valerius, 1515-1544. / Dioscorides Pedanius, of Anazarbos. Medica materia. / Aretius, Benedictus, d. 1574. Stocck-Hornij et Nessi in Bernatium Helvetiorum ditone montium. / Gesner, Konrad, 1516-1565. Hortis Germaniae.

1382. 1598: De facile parabilibus tam simplicibus quam compositis medicamentis, ad Andromachum, libri duo. [Lugduni, etc.], apud heredes Andreae Wecheli. 1598.

2°: [12] p., 135ℓ.

VERY SCARCE. (Appended to his Opera, 1598.). In Latin and Greek.

1383. 1598: Peri euporiston haplon te kai suntheton pharmakon biblia duo, pros Andromachon De facile parabilibus tam simplicibus quam compositis medicamentis ad Andromachum, libri duo. Joannem Aubrium, 1598.

4°: [11], 135, [7] p.

VERY SCARCE. Greek and Latin in parallel columns. "Ista quae sequuntur, hinc inde Dioscoridis Peri euporiston contextui falso adscripta, in hunc lo cum rejecimus": p. 126-127. Bound with (as issued?) his *Ta sozomena hapanta Opera quae extant omnia*. [Francofurti] 1598.

Sarrasin, Jean Antoine, 1547 -1598.

1384. 1598: Ta sozomena hapanta Opera quae extant omnia. Joan. Aubrii, 1598.

4°: [34], 479, [2], 144, [1] p.: ports.

VERY SCARCE. Greek and Latin in parallel columns. Johannes Sambucus apparently assisted in the establishment of the text. Cf. "Ad candidum lectorem" (4th-5th prelim. leaves). Includes the *De materia medica* in five books, the *De venenis* and the *De venenatis animalibus*; the two latter works are called *Alexipharmaca* and *Theriaca*, respectively, in the running titles. The *Notha*, in Greek and Latin, are printed following the text. With this is bound (as issued?) *Peri euporiston haplon te hai suntheton pharmakon De facile parabilibus tam simplicibus quam compositis medicamentis* [Francofurti] 1598.

Zsomboki, Janos, 1531-1584. / Sarrasin, Jean Antoine, 1547-1598.

1385. 1695: Acerca de la materia medicinal, y de los venenos mortiferos. Valencia. 1695.

8°: [24], 618, [30] p., illus. VERY SCARCE.

1386. 1829: In Medicorum Graecorum Opera vols XXV-XXVI. 1829-1830.

4°: VERY SCARCE.

1387. 1829: Pedanii Dioscoridis Anazarbei De materia medica libri quinque: Ad fidem codicum manuscriptorum Lipsiae: prostat in officina librarian Car. Cnoblochii, 1829-30.

2 vols.

VERY SCARCE. Vol. 2 has title: *Pedanii Dioscoridis Anazarbei tomus secundus, Libri Peri deleteriou, iobolon kai euporistou spurii, edidit, interpretatus est, commentariis ... indicibusque necessariis auxit Curtius Sprengel ...* Greek text at top of page accompanied by Latin translation below.

Sprengel, Kurt Polycarp Joachim, 1766-1833, ed.

1388. 1906: De materia medica libri quinque, Berolini, Weidmann, 1906-14 [v. 1, 1907]

3 vols.

VERY SCARCE. Text in Greek. "Dioscuridis Liber de simplicibus": v. 3, p. [151]-317.

Dioscorides Pedanius, of Anazarbos / Dioscorides Pedanius, of Anazarbos Liber de simplicibus. / Wellmann, Max, 1863-1933.

DIOSCORIDES

- 1389. 1906:** Codex Aniciae Iulianae picturis illustratus: nunc Vindobonensis Med. Gr. I. phototypice editus. Lugduni Batavorum: Sijthoff, 1906.
2 vols. (chiefly facsimis.)
VERY SCARCE. Karabacek, Josef von, 1845-1918. / Premerstein, Anton, Ritter von, 1869- / Wessely, Karl, 1860-1930. / Mantuani, Josef, 1860-1933. / Österreichische Nationalbibliothek. Manuscript (Med. Gr. I).
- 1390. 1906:** Pedanii Dioscuridis anazarbei De materia medica libri quinque. Berolini: apud Weidmannos, 1906-3 vols.
VERY SCARCE. 1914.
Wellman, Max, 1863-1933, ed. / Crateuas. / Sextius Niger.
- 1391. 1906:** De materia medica libri quinque, Berolini, Weidmann, 1906-14 [v. 1, 1907]
3 vols.
VERY SCARCE. Text in Greek. "Dioscuridis Liber de simplicibus": v. 3, p. [151]-317.
Dioscorides Pedanius, of Anazarbos Liber de simplicibus. / Wellmann, Max, 1863-1933.
- 1392. First Greek edition, 1499:** Pedacij Dioscoridis de materia medica libri sex. Venetiis: apud Aldum, Mense Iulio 1499.
2°: [173]ℓ.
VERY SCARCE. De materia medica libri sex. Title and text in Greek; preface and colophon in Latin. Editio princeps. Included are the Theriaca and Alexipharmaca of Nicander but issued without the Scholia, which are included in copies held by the British Museum. Without catchwords; initial capitals have not been filled in.
- 1393. 1549:** Libri Octo Græce Et Latine. Paris, B. Prévoist for P. Haultin 1549.
8°: Roman & Greek type, double column, parallel text & translation, woodcut printer's device on title (Renouard 446).
VERY SCARCE. First Edition prepared by Jacques Goupyl. It is based on Paris manuscripts with scholia. "Diese Ausgabe wird wegen guten Textes, Correctheit, netter und bequemer Ausstattung sehr geschätzt" (Choulant). "For fifteen hundred years, the writings of Dioscorides - were regarded as the ultimate authority on materia medica. Dioscorides described more than six hundred plants - was the first to write about its [opium's] virtues, to point out its great benefits in the relief of pain, insomnia, and chronic cough - the first to describe the medicinal usefulness of aloes, ammoniac, aconite, and ginger - HE WAS THE FIRST TO STATE THE NEED FOR TESTING THE PURITY OF DRUGS - DIOSCORIDES RECOGNIZED FAMILY RELATIONSHIPS BETWEEN PLANTS SEVENTEEN CENTURIES BEFORE LINNÆUS - The revival of the teachings of Dioscorides during the Renaissance laid the foundations for scientific botany and pharmacy" (Notable Medical Books p. 21). Physician Jean Ruel's Latin translation parallels the complete Greek text, which was printed once more in the 16th century and not again until 1829. Undoubtedly of interest to courtiers, BOOK VI TREATS POISONS and Books VII and VIII poisonous animals.
Pritzl no. 2295; Durling 1135; Choulant, Handbuch pp. 789; Hoffmann I: 6001 "Correct u. sehr geschätzt".
- 1394. 1542:** Dioscoride fatto di Greco Italiano: Al cui fine sono apposte le sue tavole ordinate, con certe avvertenze, e trattati necessari, per la materia medesima. Venetia: Per Curtio Troiano di Navo, 1542.
4°: 310, [14]ℓ.
VERY SCARCE. Colophon: In Venetia per Giovanni de Farri & fratelli ... Translated by Sebastiano Fausto. The sixth book comprises a translation of the De venenis and the De venenatis animalibus. Master microform held by: GmC.
Fausto, Sebastiano, 16th cent.
- 1395. 1543:** Pedanii Dioscoridis Anazarbei De medicinali materia libri sex Ioanne Ruellio Suessionii interprete ... ; additis etiam annotationibus sive scholiis brevissimis quidem, quae tamen de medicinali materia omnem controversiam facile tollant per Gualtherum H. Ryff ... ; accessere in eundem autorem Schola nova, cum nomenclaturis Graecis, Latinis, Hebraicis, & Germanicis, Ioanne Lonicero autore ... Franc[forti] : Apud Chr. Egenolphum, [1543].
2°: a-b⁶ A-2N⁶ O⁴ α⁶ β⁴ A-O⁶ P⁴; ??ℓ.; [24], 439, [1] p., [10], 87ℓ., illus.
VERY SCARCE. The Scholia nova of Lonicerus has separate t.p. with imprint: Marpurgi : Christianus A Egenolphus excudebat. Colophon dated 1543. Translated from the Greek; this translation first published 1516.
- 1396. 1547:** Anazarbeo della materia medicinale. Firenze, 1547.
16°: 302, [8]ℓ.
VERY SCARCE. Dioscorides, Pedanius, of Anazarbos.
- 1397. 1548:** Il Dioscoride. In Vinegia: appresso Vincenzo Valgrisi ..., 1548.
4°: [64], 756, 128, [8] p.
VERY SCARCE. Includes indexes. The sixth book includes translations of the De venenis and the De venenatis animalibus, and has separate t.p. and paging. Title vignette (printer's device), initials. "Il sesto libro" has a separate title-page and pagination. The title-pages are engraved.
Mattioli, Pietro Andrea, 1500 -1577.
- 1398. 1555:** Pedacio Dioscorides ...: acerca de la materia medicinal, y de los venenos mortiferos ... traduzido de ... Griega ... Anvers: J. Latio, 1555.
4°: [9], 616, [21] p. illus.
VERY SCARCE. Coll.-vert. A. Lacuna; coll. (L. de la Cerda).
- 1399. 1598:** Pedakiou Dioskoridou tou Anazarbeos ta sozomena hapanta. = Pedacii Dioscoridis Anazarbaei opera quae extant omnia.. Ioan. Aubrii., 1598.
2°: [36], 479, [3], 144, [14], 135, [9] p.: ports.
VERY SCARCE. Greek title romanized. Latin and Greek in parallel columns. Signatures:):6[beta]-[delta]4a-2r6[alpha]8 2[beta]-[mu]6*6A-K6L8[par.]4. In gathering [alpha]8, [alpha]1 not signed; [alpha]2-5 signed "[alpha]. j." - "[alpha]. iiij." . Title vignette (printer's device), head- and tail-pieces and initials. Includes the De materia medica in five books, the De venenis and the De venenatis animalibus (called Alexipharmaca and Theriaca, respectively, in the running titles), the Scholia of Saracenus, and the De facile parabilibus tam simplicibus quam compositis medicamentis (the last with separate t.p. in Greek and Latin). Has special t.p.: ... Pedacii Dioscoridis Anazarbaei De facile parabilibus tam simplicibus quam compositis medicamentis, ad Andromachum, libri duo. Interprete Iano Antonio Saraceno ... apud heredes Andeae Wecheli, Claudium Marnium, & Ioannem Aubrium, 1598.
Sarrasin, Jean Antoine, 1547 -1598.
- 1400. 1559:** Les six livres de Pedacion Dioscoride d'Anazarbe de la matiere medicinale. Lyon: Chez Thibault Payan, 1559.
2°: [14], 574, [1] p.: ill.
VERY SCARCE. Colophon: Imprime a Lion, par la vefve de Balthazar Arnoullet. Translated by Martin Mathee, who has added (p. 542-574) a "Description de plusieurs simples non mentionnez par Dioscoride." The sixth book comprises a translation of the De venenis and the De venenatis animalibus. Includes index. Master microform held by: GmC.
Mathee, Martin.
- 1401. 1518:** De materia medica [Greek] Venetiis: in aedibus Aldi et Andreae Soceri, 1518.
4°: [13], 235, [1]ℓ. VERY SCARCE.

1402. 1610: Kräuterbuch. Von allerley wolriechenden Kräutern, Gewürtzen, köstlichen Oelen und Salben, Bäumen, Hartzen, Gum(m)i, Geträyt, Kochkräutern, scharpffschmäckenden Kräutern, und andern, so allein zur Artzney gehörig, Kräuterwein, Metalln, Steinen, allerley Erden, allem und jedem Gifft, viel und mancherley Thieren, und derselbigen heylsamen und nutzbaren Stück. Erstlich durch J. Danzium von Ast verteutscht, nun mehr aber von Petro Uffenbach auff's neue übersehen, verbessert...und nicht allein mit vielen Figuren in Kupffer geziert, sondern auch mit deß wohlverfahrnen Wundarztes Hieronymi Braunschweig zweyen Büchern, als der Kunst zu destillieren, und dann dem heylsamen und vielfaltigen Gebrauch aller und jeden destillierten Wasser, vermehrt. Frankfurt am Mayn, E. Kempfer für C. Corthoys 1610.

2°: [12], 616, [34] p., 2 engraved title borders, one folding woodcut plate. 569 plant illus.

VERY SCARCE. Nissen BBI 498 [die Angabe Holzschnitte ist jedoch falsch - wenngleich sie weiter übernommen wird - es handelt sich eindeutig um Kupferstiche]. Pergament fleckig und berieben, Schließbändchen fehlen. Stark gebräunt, stellenweise auch finger- und tintenfleckig. Ca. 15 Bl. mit hinterlegten Wurmlöchern im weißen Rand. Titel mit Besitzvermerk. Das letzte Registerblatt mit längeren hinterlegten Einrissen. Es fehlt das letzte Blatt mit dem Druckvermerk (Fotokopie), sonst vollständig. Für ein Gebrauchsbuch ordentlich erhalten.

1403. German transl., 1614: Kräuterbuch. Erstlich durch J. Danzium von der Ast verteutscht, nun mehr aber von Petro Uffenbach auff's neue übersehen... auch mit des H. Braunschweig zweyen Büchern, als der Kunst zu destillieren vermehrt. Frankfurt, E. Kempfer für C. Corthoys, 1614 (i. e. 1610).

2°: Mit 2 (1 altkol.) gest. Titelbord. von G. Keller, 1 kol. doppelblattgr. Holzschnittaf., über 500 altkol. Pflanzenholzschn. u. 11 (4 kol.) Pflanzenkupf. im Text. 6 Bll., 616 S., 16 (statt 17) Bll.

VERY SCARCE. Nissen, BBI 498; Pritzel 2322. -

Seltene Titelaufgabe der Ausgabe von 1610 (das frühere Datum befindet sich auf dem hier fehlenden Schlußblatt). Die Holzschnitte (Kräuter, Destillierapparate etc.) in schönem Altkolorit, teilw. mit Deckweiß. Mit der in keiner Bibliographie erwähnten Holzschnittaf. im zweiten Teil, die als Umrahmung für ein Gedicht auf den Destillierofen dient. - Kolorit teilw. leicht durchschlagend. Etwas gebräunt u. fleckig, zu Beginn u. Ende teilw. wasserrandig, vereinzelt Randläsuren.

1404. 1557: Historia de las yeruas, y plantas. Anvers: Herederos de A. Byrcmam, 1557.

4°: 520 p. illus.

VERY SCARCE. T. p. wanting; supplied from Palau y Dulcet.

Spanish editions

1405. 1563: Acerca de la materia medicinal: y de los venenos mortiferos. Salamanca: Gast, 1563.

4°: 616 p. illus.

VERY SCARCE. Laguna, Andres de, 1499-1559.

1406. 1566: Pedacio Dioscorides | Anazarbeo, Acerca De La Ma- | teria Medicinal, Y De Los Veneonos Mor- | tiferos, Traduzido de lengua Griega, en la vulgar Caste- | llana, & ilustrado con claras y substantiales Annotationes, y con las figu- | ras de innumeras plantas exquisitas y raras, por el Doctor | Andres de Laguna, Medico de Iulio. III. | [...4 lines of titles and memberships...] | [woodcut coat-of-arms] | En Salamanca | Por Mathias Gast. Año | 1566 | Con Priuilegio. | Està tassado en dos ducados.

2°: ¶⁶ A-Z⁸ Aa-Qq⁸ Rr⁶ Ss⁴; ??ℓ.; [12] 616, [28] p., illus., portait (woodcut of de Laguna on ¶3r). Other woodcuts of plants, animals, fish, etc., and genre scenes in the text.

VERY SCARCE. Translation by Andres de Laguna [see note below] of ??????????. The first edition of de Laguna's

Spanish translation appeared in 1555. It was considered the basic work on botany in Spain.

Andres de Laguna. (BORN: Segovia, Spain, 1499; DIED: 1559) *Spanish physician & author.* De Laguna was a respected physician, and a widely read man of letters throughout the continent.

REFERENCES: Hunt Botanical Catalog: no. 95. (**Laguna**) ABE: I 488, 16-199; 1076, 292-352; II 491, 178-181. • ABI: I 544, 70-75. • Colmiero, *La Botanica*, 1858: p. 150-1. • Jöcher, *Gelehrten-Lexikon, Supplement.* • WBI.

1407. 1570: Acerca de la materia medicinal, y de los venenos mortiferos. Salamanca: Mathias Gast, 1570.

4°: [28], 616, [27] p.: illus., port.

VERY SCARCE. Imperfect: sig. 2R3 mutilated. Master microform held by: GmC.

Laguna, Andres de, 1499-1559.

DIPPEL, Andreas.

1408. — German, 1802 [Collection catalog].

Seiner Durchlaucht dem Herrn Herrn Churprinzen zu Pfalzbaiern, Carl Ludwig August bey Überreichung des vaterländ. Mineralienkabinets unterthänigst gewidmet von Schichtmeister Dippel ... München, 1802.

8°: 56 p. RARE.

DIRUF, Carl Jacob Christoph Joseph. (BORN: 1774; DIED: after 1833) *German physician.*

Diruf was a professor of medicine and surgery at Pfalzbaiern.

REFERENCES: DBA: I 240, 413-417; II 277, 166. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • WBI.

1409. — German, 1805.

Ideen | zur Naturerklärung | der | Metror- oder Luftsteine | [tapered rule] | von | C.I. Diruf | [...4 lines of titles and memberships...] | [tapered rule] | [...2 lines of quotation, signed Cicero...] | [ornate rule] | Göttingen, 1805. | Bei Heinrich Dieterich.

8°: π² A-I⁸ K⁵; 79ℓ.; [4], [1]-153, [1] p. PAGE SIZE: 174 x 100 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Inhaltsanzeige."; [1]-6, "Vorrede."; [7], Sectional title page, "Ideen | zur Naturerklärung | der | Meteor- oder Luftsteine."; [8], Blank.; [9]-153, Text.; [1 pg], Blank.

RARE. At the beginning of the nineteenth century, there was a debate concerning the origins of meteorites. Many believed they were developed in the earth's upper atmosphere through some unknown process, while a minority supposed they originated outside the earth's atmosphere. In this monograph, Diruf supports the theory of formation in the earth's atmosphere, referring to meteorites as "Luftsteine" (=air-stones).

REFERENCES: BL: [1136.c.36.]. • Burke, *Cosmic Debris*, 1986: [not mentioned]. • LKG: XVI 352.

DITMAR, Ludwig Peter Friedrich.

Neuer Beitrag zur lithographischen Kenntniss der Sudbaltischen Lander mit besonderer Rücksicht auf Mecklenburg von Adolph Christian Siemssen und L.P.F. Ditmar. Rostock und Leipzig, 1804.

See: **Siemssen, Adolf Christian.**

DOELTER

DITTLER, Emil.

REFERENCES: DBA: II 278, 158-162. • Poggendorff: 5, ?? & 6, ??. • WBI.

1410. — German, 1915.

[Contained within a single rule box:] Mineralsynthetisches | Praktikum | Eine Praktische | Anleitung Für Das Laboratorium | Von | Priv.-Doz. Dr. E. Dittler | Mit Einem Beitrag: | "Optische Untersuchungsmethoden" | Von | Dr. H. Michel | Mit 56 Textfiguren | [ornament] | Dresden und Leipzig | Verlag von Theodor Steinkopff | 1915.

8°: [i]-v, [1], [1]-150, [2] p., 56 illus. (diagrams, instruments). PAGE SIZE: 222 x 158 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte..."; [iii]-v, "Vorwort."; [vi], Blank; [vii], "Inhalts-Übersicht."; [viii], "Literatur."; [1]-146, Text.; [147]-150, "Sach=Register."; [2 pgs], Advertisements.

VERY SCARCE. A short textbook outlining the procedures for manufacturing synthetic minerals. Written for the beginner, the text includes much practical advice on the laboratory procedures, materials, and techniques, as well as diagrams of the equipment required. Oddly, the literature Dittler cites ignores all similar works of the French chemists and mineralogists, instead referencing only German books on chemistry and chemical manufacture.

REFERENCES: NUC.

DOBLICKA, Karl.

1411. — German, 1852.

Tirols | Mineralien. | [ornate rule] | Von | Karl Dobllicka. | [ornate rule] | Wien. | Verlag von Carl Gerold. | 1852.

8°: 120 p.

VERY SCARCE. Early description of the minerals found in the Austrian Tyrols.

Facsimile reprint, 1980: *Tirols Mineralien*. München, Lapis, 1980. 120 p.

REFERENCES: Spencer, *Catalogue of Topographical Mineralogies*, 1948.

DOBSON, Thomas. (BORN: probably near Edinburgh, Scotland, 1751; DIED: Philadelphia, Pennsylvania, U.S.A., 9 March 1823) *American publisher, printer & bookseller*.

Dobson married in Scotland but emigrated to the United States in the spring of 1784. He opened a bookshop in Philadelphia in 1785 and was soon established as one of the leading dealers of medical, professional and scientific books in the United States. In the post Revolutionary period he was noted for printing America editions of recent British publications. To sell his merchandise, he cultivated close relationships with the local scientific societies and the faculty of the University of Pennsylvania, where Dobson met many potential customers. Several set backs through the years caused his business to fail and for Dobson to die in obscurity.

REFERENCES: *American Dictionary of Printing & Bookmaking*, 1894.: 146. • ANB: 6, 662-3 [by R.D. Arner]. • Arner, R.D., "Thomas Dobson's Rolling Mill for Copper: A Note on the Publisher of the Encyclopaedia," *Pennsylvania Magazine of History and Biography*, Jan.-Apr., 1994, 117-36. • Drake, *Dictionary of American Biography*, 1872: p. 274. •

New England Galaxy and Masonic Magazine: 28 (Mar. 1823), 4 [obituary].

A Compendious System of Mineralogy & Metallurgy. Extracted from the American Edition of the Encyclopaedia, now publishing by Thomas Dobson ... (Philadelphia, 1794 and other editions).

See: **Compendious System**.



DOELTER

DOELTER (CISTERICH Y DE LA TORRE), Cornelio August Severius. (BORN: Arroyo, Guayama, Puerto Rico, 16 September 1850; DIED: Kolbnitz, Carinthia, Austria, 8 August 1930) *Austrian mineralogist & geochemist*.

Doelter's father emigrated to Puerto Rico where he married his mother, a wealthy plantation owner. With his mother he moved to Karlsruhe, Baden in 1855, entering the lyceum in 1860. He studied chemistry, physics, mineralogy and geology at the University of Freiburg in Breisgau and at Heidelberg. In 1876, Doelter was appointed assistant professor of mineralogy and petrology at the University of Graz. He was named full professor in 1883. He succeeded G. TSCHERMAK at the University of Vienna in 1911. Through his work in physical-chemical mineralogy, he is considered one of the founders of modern petrology.

REFERENCES: *Almanach der Akademie der Wissenschaften in Wien*: 81 (1931), 314-6 [by A. Himmelbauer]. • DSB: 4, 140-2 [by W. Fischer]. • Knoll, *Österreichische Naturforscher*, 1957: 64-6, portrait [by H. Leitmeier]. • *Mineralogical Magazine*: 22 (1930), 390-1 [by L.J. Spencer]. • NDB: 4, 25-6 [by H. Leitmeier]. • Poggendorff: 3, 367-8, 4, 338 & 5, 299. • Sarjeant, *Geologists*, 1980: 2, 908 & Suppl. 2 (1995), 1, 581. • *World Who's Who in Science*: 468. • *Zentralblatt für Mineralogie*: pt. A (1930), 476-7 [by E. Dittler].

1412. — German, 1890.

Allgemeine chemische Mineralogie, von C. Doelter. Leipzig, W. Engelmann, 1890.

8°: iv, 277, [1] p., illus., diagrams. "Literatur" at head of chapters.

VERY SCARCE. A general discussion of chemical mineralogy, a principal study of the author. Here

he presents basic ideas and gives numerous examples that illustrate the application of chemistry to mineral science. *Allgemeine chemische Mineralogie* collects together all facts pertaining to chemical mineralogy and presents the information in a logical order. After a discussion of crystal structure and its relation to chemistry and isomorphism, simple methods of chemical analysis are described. Then the author presents the subject of mineral synthesis in a lengthy section. He defines his terminology carefully and carries it forward in his text. He divides the synthesis into two parts: recrystallization of mineral substances already prepared, and production of minerals and their crystallization. Under each are given practical methods, followed by brief comments on the results of experimentation. Nearly every synthesis that had been published up to the time may be traced with the aid of this book. The last sections of the volume deal with chemical changes affected by temperature, the action of solvents, the forms of minerals in nature, and the chemical constitution of minerals.

REFERENCES: *American Naturalist*: 25 (Nov., 1891), no. 299, p. 995. • Bolton, *Bibliography of Chemistry*, 1893: p. 404. • NUC.

1413. — German, 1905.

Physikalisch-Chemische | Mineralogie | von | Dr. C. Doelter. | Professor der Mineralogie an der Universität Graz | [rule] | Mit 66 Abbildungen im Text | [ornament] | Leipzig | Verlag von Johann Ambrosius Barth | 1905.

8°: π^8 1-178 χ^1 ; 145 ℓ .; [4], [i]-x, [1], [1]-272, [2] adverts. p., 66 text illus., subject and author indexes. PAGE SIZE: 242 x 162 mm.

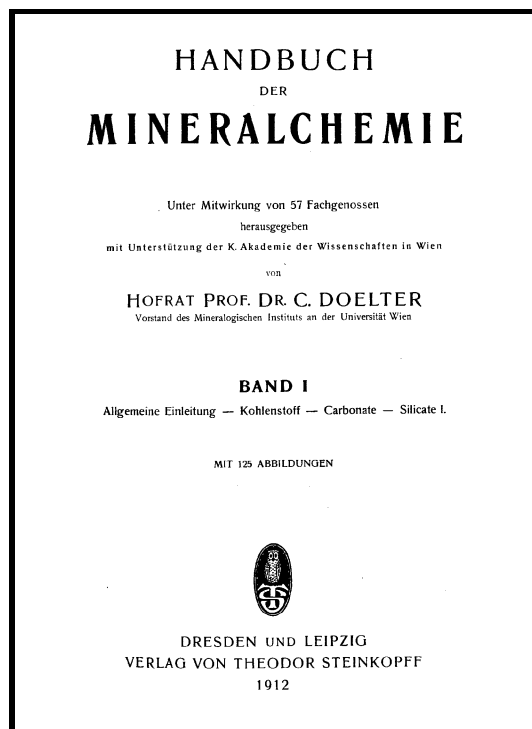
CONTENTS: [4], "Johann Ambrosius Barth in Leipzig. | Gegründet 1780. | [double rule] | Prospekt Handbuch der Angewandten Physikalischen Chemie ..."; [i], Blank.; [ii], Series Title page, "Handbuch | der | Angewandten Physikalischen Chemie | in Einzeldarstellungen ..."; [iii-iv], Title page, verso blank.; [v], "Vorwort."; [vi], Blank.; [vii-xi], "Inhaltsverzeichnis."; [1 pg], Blank.; [1]-257, Text.; [258]-262, "Autoren-Verzeichnis."; [263]-272, "Sachregister."; [1 pg], R. Feuss advertisement.; [1 pg], Leitz advertisement.

SCARCE. A pioneering textbook covering physical and chemical mineralogy. Along with J.H.L. Vogt, Doelter is credited with cofounding a new discipline which can be directly traced to the modern day studies of geochemistry and to a lesser extent petrology. Topics of the volume include crystal structure, size of crystal molecules, polymorphism, isomorphism, relationship between chemistry and crystallography, and the relationship between a mineral's hardness and its chemistry.

REFERENCES: NUC.

1414. — German, 1912-31.

Handbuch | Der | Mineralchemie | Unter Mitwirkung von 57 Fachgenossen | herausgegeben | mit Unterstützung der K. Akademie der Wissenschaften in Wien | von | Hofrat Prof. Dr. C. Doelter | Vorstand des Mineralogischen Instituts



HANDBUCH DER MINERALCHEMIE, 1912

an der Universität Wien | Band I | Allgemeine Einleitung — Kohlenstoff — Carbonate — Silicate I. | Mit 125 Abbildungen | [ornament] | Dresden und Leipzig | Verlag Von Theodor Steinkopff | 1912.

[VOLUME 2, PART 1]

Handbuch | ... | Band II | Erste Hälfte | Silicate | Mit 37 Abbildungen Und 3 Tafeln | ... | 1914.

[VOLUME 2, PART 2]

Handbuch | ... | Band II | Zweite Abteilung | Silicate dreiwertiger Metalle | Mit 18 Abbildungen Und 1 Tafel | ... | 1917.

[VOLUME 3, PART 1]

Handbuch | ... | Band III | Erste Abteilung | Die Elemente und Verbindungen von: Ti, Zr, | Sn, Th, Nb, Ta, N, P, As, Sb, Bi, V und H | Mit 17 Abbildungen | ... | 1918.

[VOLUME 3, PART 2]

Handbuch | ... | herausgegeben | von | C. Doelter und H. Leitmeier | Band III | Zweite Hälfte | Enthält: Li, Na, K, Cu, Rb, Ag, Cs, Au, Be, Mg, Ca, Zn, Sr, Cd, Ba, Hg, Ra, B, | Al, Ga, In, Tl, Metalle der seltenen Erden, Fe, Mn, Co, Ni und Platinmetalle | Mit 140 Abbildungen Und Zahlreichen Tabellen | ... | 1926.

[VOLUME 4, PART 1]

DOEVEREN

Handbuch | ... | herausgegeben | von | C. Doelter
und H. Leitmeier | Band IV | Erste Hälfte |
Schwefel-Verbindungen | Mit 71 Abbildungen |
... | 1926.

[VOLUME 4, PART 2]

Handbuch | ... | herausgegeben | von | C. Doelter
und H. Leitmeier | Band IV | Zweiter Teil | Sulfate,
Chrom, Molybdän, Wolfram, | Uran, Haloidsalze
und Salzlagerstätten | Mit 218 Abbildungen | ...
| 1929.

[VOLUME 4, PART 3]

Handbuch | ... | herausgegeben | von |
C. Doelter† und H. Leitmeier | Band IV |
Dritter Teil (Schlußband) | Haloidsalze, Fluoride,
Edelgase, organische Verbindungen | (Kohlen,
Asphalt, Erdöl), Nachträge, Generalregister | Mit
109 Abbildungen, Zahlreichen Tabellen | Und
Einer Tafel | ... | 1931.

9 parts in 4 vols. [VOL 1: 1912] 8°: [i]-xiv, 1-1008 p., 125 illus. [VOL 2, pt. 1: 1913-4] 8°: [i]-xvi, 1-848 p., 37 illus., 3 plates. [VOL 2, pt. 2: 1914-7] 8°: [i]-xiv, 1-1144 p., 18 illus., one plate. [VOL 2, pt. 3: 1919-21] 8°: [i]-xii, 1-472 p., 6 illus. [VOL 3, pt. 1: 1913-8] 8°: [i]-xxii, 1-965, [1] p., 17 illus. [VOL 3, pt. 2: 1919-26] 8°: [i]-xvi, 1-1244 p., 140 illus., one table. [VOL 4, pt. 1: 1925-6] 8°: [i]-xx, 1-1003, [1] p., 71 illus. [VOL 4, pt. 2: 1926-9] 8°: [i]-xx, 1-1494 p., 218 illus. [VOL 4, pt. 3: 1929-31] 8°: [i]-xxii, 1-1174 p., 109 illus., one plate, one table. PAGE SIZE: 252 x 162 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v]-vi, "Gleichwort."; [vii]-xiv, Contents.; [1]-27, General introduction.; [28]-96, Carbon minerals.; [97]-556, Carbonates.; [557]-965, Silicates (part 1).; [966]-983, Author index.; [984]-1008, Subject index.

[Vol 2, pt. 1] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-xvi, Contents.; 1-806, Silicates (part 2).; 807-821, Author index.; 822-848, Subject index.

[Vol 2, pt. 2] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v]-xiv, Contents.; 1-1076, Silicates (part 3).; 1077-1094, Author index.; 1095-1144, Subject index.

[Vol 2, pt. 3] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-xii, Contents.; [1]-444, Silicates (part 4).; 445, Errata.; 446-454, Author index.; 455-472, Subject index.

[Vol 3, pt. 1] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-xxii, Contents.; 1-915, Elements and oxides.; 916-917, Errata.; 918-942, Author index.; 943-965, Subject index.; [1 pg], Blank.

[Vol 3, pt. 2] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-xvi, Contents.; 1-1175, Elements and oxides.; 1176, Errata.; 1177-1205, Author index.; 1206-1244, Subject index.

[Vol 4, pt. 1] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-xx, Contents.; 1-943, Sulphur combinations.; 944, Errata.; 945-962, Author index.; 963-1003, Subject index.; [1 pg], Advertisement.

[Vol 4, pt. 2] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi],

Blank.; [vii]-xx, Contents.; 1-1428, Sulphates, chromates, molybdates, tungstates, uranates, haloidsalts.; 1429-1432, Errata.; 1433-1458, Author index.; 1459-1494, Subject index.

[Vol 4, pt. 3] [i-ii], Half title page, verso series title page.; [iii-iv], Title page, verso blank.; [v], Forward.; [vi], Blank.; [vii]-viii, Review of the series.; [ix]-xxii, Contents.; 1-990, Haloidsalts, fluorides, Nobel gases, organic combinations.; 991, Errata.; 992-1058, Supplement.; 1059-1080, Author index.; 1081-1102, Subject index.; 1103-1174, General index to the complete work.

RARE, especially in complete sets. One of the great compilations in mineralogy, this work published over the course of twenty years included chemical-mineralogical descriptions from many collaborators, but Doelter authored about half of the material. Originally the work was intended to be completed by 1914 in two or three volumes, but the good reception of the first sections and the large number of new mineral species discovered during its publication, caused the *Handbuch der Mineralchemie* to balloon. The series' focus was on the chemistry of the minerals with little attention paid to the natural occurrences of the species, and although of interest to mineralogists it is actually more important as a compilation in the early history of geochemistry studies. Each volume has its own author and subject index, while the final volume contains a general index to the complete work. H. Leitmeier became a coeditor in 1925 and after Doelter's death full editor on the last volume.

REFERENCES: Dana's 7th (Bibliography): 70. • NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 1741.

1415. — German, 1915.

Die Farben der Mineralien insbesondere der Edelsteine. Braunschweig, Sammlung Vieweg, 1915.

8°: 96 p., 2 folding charts. VERY SCARCE.

Facsimile reprint, 1987: *Die Farben der Mineralien insbesondere der Edelsteine*. Braunschweig, 1915. 8° 96 Seiten u. 2 Abb. Kart.

1416. — German, 1916.

Die Mineralschätze der Balkanländer und Kleinasien. Stuttgart, F. Enke, 1916.

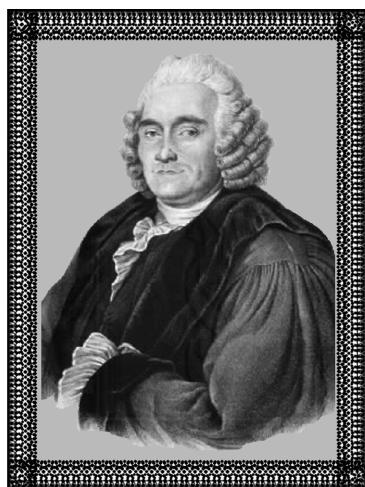
8°: 138 p., 27 tables. RARE.

REFERENCES: Milojević, *Geoloska Bibliografija Jugoslavije*, 1952: 75.

DOEVEREN, Wouter van. (BORN: Philippine, Prov. Zeeland, The Netherlands, 16 November 1730; DIED: Leiden, The Netherlands, 31 December 1783) *Dutch physician*.

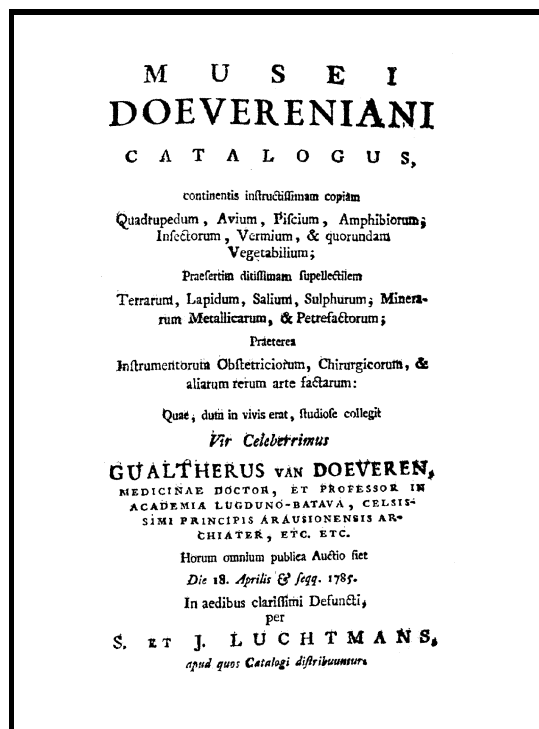
Doeveren studied medicine at the University of Leiden. After graduation in 1754, Doeveren became professor of surgery and obstetrics at the University of Groningen. In 1771, he accepted a similar appointment at the University of Leiden. For amusement, he built a private museum of natural history specimens, especially rich in minerals and fossils.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78. • BAB: 192, 14-32. • Engel, *Dutch Zoological Cabinets*, 1986: no. 390. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 198-9 [by C.E. Daniëls]. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Kobus, *Biographisch Woordenboek*, 1886. • *Nouvelle Biographie Générale* (Hoefer): 7, cols. 438-9. •



DOEVEREN

NNBW: 4, cols. 511-2. • Van der Zwaag, P., *Wouter van Doeveren, 1730-1783*. Thesis. Free University of Amsterdam, 1970. • WBI.



MUSEI DOEVERENIANI CATALOGUS, 1785

1417. — Latin, 1785 [Sale catalog].

Musei | Doevereniani | Catalogus, | continentis instructissimam copiam | Quadrupedum, Avium, Piscium, Amphibiorum, | Insectorum, Vermium, & quorundam | Vegetabilium; | Praefertim

ditissimam supellectilem | Terrarum, Lapidum, Salium, Sulphurum, Minera- | rum Metallicarum, & Petrefactorum; Praeterea | Instrumentorum Obstetriciorum, Chirurgicorum, & | aliarum rerum arte factarum: | Quae, dum in vivis erat, studiose collegit | Vir Celeberrimus | Gualtherus van Doeveren, | [...4 lines of titles and memberships...] | Horum omnium publica Auctio siet | Die 18. Aprilis & seqq. 1785. | In aedibus clarissimi Defuncti, | per | S. et J. Luchtmans, | apud quos Catalogi distribuuntur.

8°: [i]-viii, [1]-150, [2] p.

RARE. Compiled by Dionysius van de Wijnpersse and SEBALD J. BRUGMANS. This is a sales catalog of the large collection of natural history specimens and minerals formed by the Dutch gynecologist Wouter van Doeveren, together with smaller collections of surgical and scientific instruments. It lists items sold at public auction on April 18, 1785 and subsequent days, and includes upwards of 500 specimens of mammals, amphibia, insects, etc., 2,660 specimens of minerals, 58 lots of obstetric, ophthalmological and other surgical instruments, and 114 lots of various objects including scientific apparatus. The 4-page introduction by Dionysius van de Wijnpersse deals with the collection of minerals, by far the richest of the selections. Engel records that some of these minerals went to the University of Leiden.

REFERENCES: BL: [T.259.(8.)]. • Engel, *Dutch Zoological Cabinets*, 1986: no. 390. • Murray, *Museums*, 1904: 2, 208. • Offenbacher, *Bookseller*: cat. 33 (1983), no. 47.

DOHRMANN, Adolph. (BORN: 28 April 1832; DIED: Stockton, California, U.S.A., 24 October 1886) *American mineral collector.*

He was the brother of Fredrick William Dohrmann and married in San Francisco on 12 September 1873.

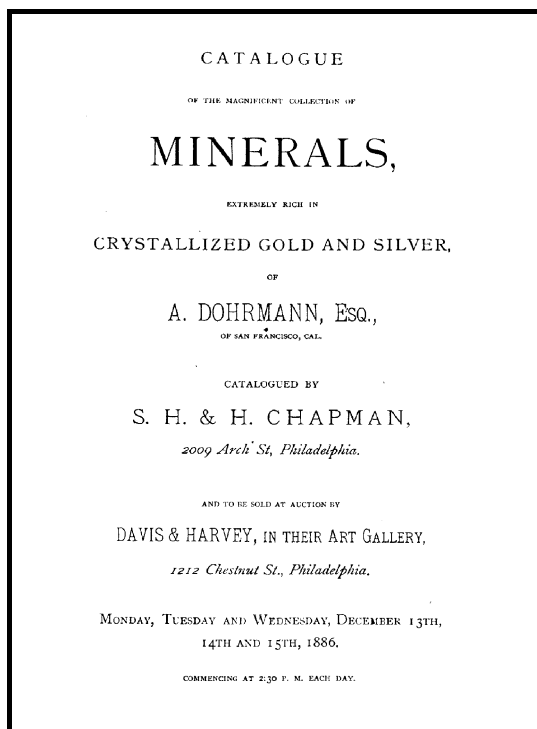
REFERENCES: Conklin, L., "Anatomy of a Mineral Sale: the Dohrmann Collection," *Mineralogical Record*, 23 (1992), no. 1, 7-13. • *San Francisco Daily Morning Call*: 26 October 1886, p. 8, col. 3 [obituary].

1418. — English, 1886 [Auction catalog].

Catalogue | Of The Magnificent Collection Of | Minerals, | Extremely Rich In | Crystallized Gold And Silver, | Of A. Dohrmann, Esq., | Of San Francisco, Cal. | Catalogued By | S.H. & H. Chapman, | 2009 Arch St. Philadelphia. | And To Be Sold At Auction By | Davis & Harvey, in their Art Gallery, | 1212 Chestnut St., Philadelphia. | Monday, Tuesday and Wednesday, December 13th, 14th and 15th, 1886. | Commencing At 2:30 P.M. Each Day.

8°: π^2 2-74 82; 28 ℓ .; [1]-56 p., 9 plates (numbered I-IX; showing reproductions of gold specimens from the collection). PAGE SIZE: 228 x 162 mm.

CONTENTS: [1]-2], Title page, verso blank.; [3]-4, "Preface."; [5]-55, "Catalogue."; 56, "Scale ... Troy Weight ... Abbreviations."



DOHRMANN AUCTION CATALOG, 1886

RARE. Auction catalog of Dohrmann's large collection of minerals including many fine examples from the gold fields of California. The lots are divided by species, i.e. native gold & silver, platinum, iridium, mercury, copper, iron, antimony, tellurium, sulfur, diamond, graphite, stibnite, argentite, galena, hessite, cinnabar, fluorite, cuprite, etc. Under each of the sections is the Dana number. Harvard University was a major buyer at this auction, and many of the gold specimens are still held within their collection.

REFERENCES: *American Journal of Science*: 3rd series, **32** (1886), p. 487. • Conklin, L., "Anatomy of a Mineral Sale: the Dohrmann Collection," *Mineralogical Record*, **23** (1992), no. 1, 7-13. • Francis, C.A., "Harvard Gold," *Mineralogical Record*, **13** (1982), 355-7. • *Freilich Sale Catalog*: no. 159. • NUC.

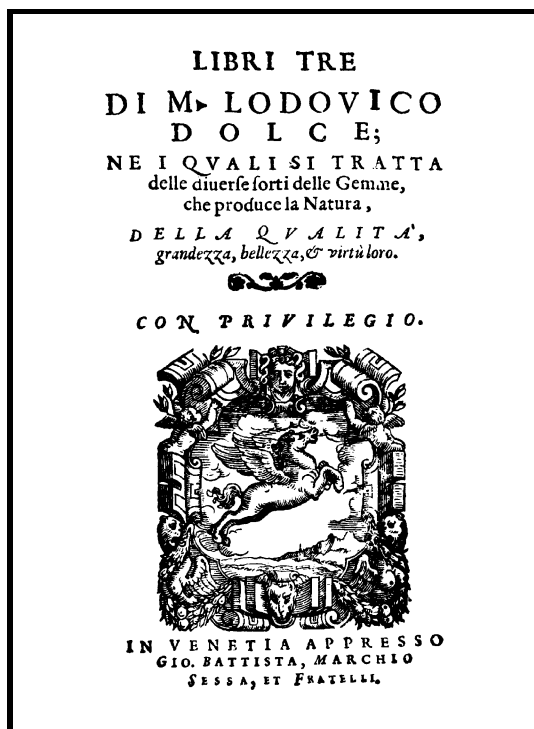
DOLCE, Lodovico. (BORN: Venice, Italy, 1508; DIED: 1568) *Italian humanist & poet.*

Dolce was born to an impoverished family; however, he studied ancient languages and literature and produced many translations of classical works.

REFERENCES: ABI: I 368, 420-431; II 212, 91-104. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • Cosenza, *Italian Humanists*, 1962-7. • *Encyclopaedia Britannica*, 11th edition. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • *Nouvelle Biographie Générale* (Hoefer): 11, 483-5. • WBI.

1419. — Latin, 1565 [First edition].

Libri Tre | Di M. Lodovico | Dolce; | Ne I Qvali Si Tratta | delle diuerse sorte delle Gemme, | che produce la Natura, | Della Qvalita, | grandezza, bellzza, & virtù loro. | [ornament] | Con Privilegio.



TRATTA, 1565

| [Printer's device] | In Venetia Appresso | Gio. Battista, Marchio | Sessa, et Fratelli.

8°: A-M⁸ N³; 99^{l.}; Foliated [1]-97, [2]^{l.}. Ornamental initials and chapter headings. COLOPHON: In Venetia, | Appresso Gio. Battista, | Marchio Sessa, | Et Fratelli. | M D LXV.

CONTENTS: [*l.* 1/=A1rv], Title page, verso blank.; *l.* 2-*l.* 3 (=A2r-A3v), Dedication.; *l.* 4 (=A4r-A4v), "Proemio."; *l.* 5-*l.* 97 (=A5r-N1v), Text.; [2^{l.}/=N2r-N3v], "Tavola De' | Capitoli Che | Nel Primo Libro | Si Contengono." [=table of contents].

RARE. A direct plagerism of Camillo Leonardi's *Speculum Lapidum* (2nd ed., Nuremberg, 1516) [which see]. Dolce was widely critized for this work, which follows exactly the contents of Leonardi's work. It contains extracts from a wide variety of ancient sources such as Pliny, Isidore, Albertus Magnus concerning gemstones, their properties, their mystical properties.

REFERENCES: Adams, *Birth and Development*, 1938: p. 155. • Agassiz, *Bibliographia Geologiae*, 1848-54: **2**, 349. • Ferguson, *Bibliotheca Chemica*, 1906: **2**, 27. • Gatterer, *Mineralogischen Literatur*, 1798-9: **2**, 23. • LKG: III 12 & XVI 194. • Sinkankas, *Gemology Bibliography*, 1993: no. 1747. • Thorndike, *History of Magic*, 1923-58: **6**, 313.

1420. 2nd edition, 1597: Trattato delle gemme che prodve la natura ... Compositione di m. Lodouico Dolce ... Hora con diligenza ristampato ... In Venetia, Appresso Gio. Battista, & Gio. Bernardo Sessa. MD[CX]VII [i.e., 1597].

8°: 98 numb.*l.*, [2] p. Printers' mark on title page. COLOPHON: In Venetia, Appresso Gio. Battista, & Gio. Bernardo Sessa. MDXCVII. VERY SCARCE.

REFERENCES: NUC.

1421. 3rd edition, 1617: Trattato | Delle Gemme | Che

Produce | la natura; | Nel Quale Si Discorre | della qualita,
grandezza, bellezza, | & virtu loro. | Compositione | di
M. Lodouico Dolce, da lui | in tre Libri diuiso. | Hora con
diligenza ristampato. | Con Privilegio. | [ornament] | In
Venetia, M D CXVII. | [rule] | Appresso Gio. Battista, &
Gio. Bernardo Sessa.

4^o: A-M⁸N⁴ (N4 blank); 100ℓ.; 99, [1]ℓ. Ornamental
initials and chapter headings. COLOPHON: In Venetia,
Appresso Gio. Battista, Marchio Sessa, et fratelli. M D
XCVII [sic]. VERY SCARCE.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993:
no. 1748. • Ward & Carozzi, *Geology Emerging*, 1984: no.
667. • Wellcome Catalog (Books): 1, no. 1829.

DOLHOPFF, Georg Andreas.

1422. — German, 1681.

Lapis Mineralis | Oder | Die höchste Artzney/
| Auß | Denen Metallenen und | Mineralien/
| Absonderlich dem Vitriolo. | Straßburg/ | In
verlegung Georg Andreas Dolhopff. | Im Jahr M.
DC. LXXXI.

4^o: 10(6 A-G⁸ H²; 64ℓ.; [12], 1-116 p.

CONTENTS: [2 pgs], Title page, verso "Clanger
Buccinae."; [7 pgs], "Vorrede."—signed Georg Andreas
Dolhopff.; [2 pgs], Laudatory poem.; [1 pg], "Joh.
Rhenanus."; 1-116, Text.

RARE. Discussion of the stones, minerals and
metals used principally in medical practice. It is
compiled from numerous previous writers on those
subjects. The work was also published by the author,
whose name appears on the imprint and at the end of
the foreword. It was one of several small works that
the author prepared giving observations on animals and
plants as well as minerals.

REFERENCES: BL. • Ferguson, *Bibliotheca Chemica*,
1906: 1, 218-9 [describes work on animals]. • Rosenthal,
Bibliotheca Magica et Pneumatica, 1907: no. 507. • VD17:
1:000140L.

DÖLLINGER, Ignaz. (BORN: Bamberg, Germany,
24 May 1770; DIED: Munich, Bavaria, Germany, 14
January 1841) *German physician & mineralogist.*

In 1794, Döllinger was appointed professor of
physiology at the University of Bamberg. In 1803, he took
a similar position at the University of Würzburg, then he
became a professor at the medical school in 1823. In 1826,
he became professor of anatomy at the University of
Munich. He authored many works on religion and church
history.

1423. — German, 1803.

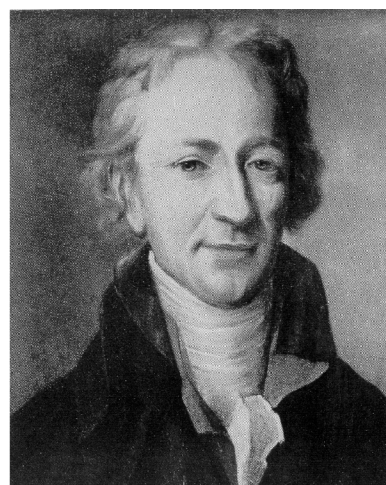
Ueber die | Metamorphose | der | Erd- und
Steinarten | aus der | Kieselreihe | von | Ignaz
Doellinger | [...5 lines of titles and memberships...] |
[ornate rule] | Erlangen | bey Iohann Iakob Palm |
1803.

8^o: 86 p.

RARE. On the metamorphose of earths and stones
from the "Kieselreihe."

REFERENCES: BL: [726.c.25.(2.)]. • LKG: XIII 231.

DOLOMIEU, Dieudonné Sylvain Guy Tancrède.
(BORN: La Tour-Du-Pin, France, 23 June 1750; DIED:
16 November 1801) *French mineralogist.*



DOLOMIEU

Dolomieu was born to aristocratic French parents on
June 24, 1750. His father got him inducted into the Order
of Malta at age 2 and enlisted in the army at the age of
4. By 16, he was a second lieutenant and shipping out
with the Order of Malta. In 1768 he killed a man in
a duel and was sentenced to life in prison. Intercession
on the part of government officials and the Pope gained
his release to a regiment at Metz. Dolomieu learned the
natural sciences from a pharmacist there and fell in love
with his daughter, Mademoiselle Thyron. By the late
1770s, Dolomieu had published some essays and established
himself as a mineralogist and geologist. He resigned from
the military in 1779, aged 29.

In the 1780s, Dolomieu traveled extensively in Spain,
Sicily, Italy, and France. He became an authority on
volcanism and his 1788-1789 expedition in the Trentino
and Tyrol districts resulted in naming of the particular
type of rock found in this region dolomite. Dolomieu's
life was a little different from the average MIT geologist's,
though. In 1786 he wrote "Every moment that is not spent
in the company of the most loving of women is spent at the
Laboratory of Natural Science."

In 1797, Dolomieu sailed for Egypt with Bonaparte.
In failing health, he left Alexandria in 1799 to return to
France. A storm forced the boat into port at Taranto
(in the south of Italy) which happened to be part of the
Kingdom of Two Sicilies, with which France was at war.
The prevailing state of hostilities landed Dolomieu in prison
for 21 months, during which he was mistreated due to a
denunciation by angry rivals in the Order of Malta.
Bonaparte's victory over the Court of Naples in February
1801 finally resulted in Dolomieu's freedom and return to
Paris. He died on November 28, 1801 of a "putrid fever."

REFERENCES: ABF: I 323, 88-115. • Barr, *Index to
Biographical Fragments*, 1973: 70. • Beauchamp, *Biographie
Moderne*, 1816. • *Catalogue of Portraits of Naturalists*: 369
[1 portrait listed]. • Cooper, A., "From the Alps to Egypt
(and back again): Dolomieu, scientific voyaging, and the
construction of the field in 18th-century natural history"
(pp. 39-63), in: Crosbie Smith, Jon Agar, eds., *Making space
for science: Territorial themes in the shaping of knowledge*.
London, Macmillan, 1998. • *Dolomites: a volume in honour of
Dolomieu* edited by Bruce Purser, Maurice Tucker, and Donald
Zenger. Oxford; Boston: Blackwell Scientific Publications,
c1994. vii, 451 p., ill., maps. [Special publication ... of
the International Association of Sedimentologists; no. 21;
ISBN 0632037873]. • Drugulin, *Sechstausend Portraits*, 1863:
nos. 1376-7. • DSB: 4, 149-50. • *Encyclopaedia Britannica*,
11th edition. • Feller, *Biographie Universelle*, 1851. • *ISIS*,
1913-65: 1, 353. • Lambrecht & Quenstedt, *Catalogus*, 1938:

DOLOMIEU

117. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, cols. 588-9. • Principe, *Volcanology in the 18th Century*, 2000. • Sarjeant, *Geologists*, 1980: 2, 910-2, Suppl. 1 (1986), 1, 390-1 & Suppl. 2 (1995), 1, 583. • WBL. • *World Who's Who in Science*: 429-30.

1424. German transl., 1783: Reise nach den Liparischen Inseln oder Nachricht von den Aiolischen Inseln, zur nähern Aufklärung der Geschichte der Vulkane etc. von Deodat de Dolomieu. Aus dem Franz. von L.C. Lichtenberg. Leipzig, 1783.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 699a.

1425. — French, 1783.

Voyage aux îles de Lipari, fait en 1781 ou, Notices sur les Îles Æoliennes, pour servir à l'histoire des volcans; suivi d'un mémoire sur une espèce de volcan d'air, & d'un autre sur la température du climat de Malthe, & sur la différence de la chaleur réelle & de la chaleur sensible par M. le Commandeur Déodat de Dolomieu, correspondant de l'Académie des Sciences, &c. &c. Paris, Sous le privilège de l'Académie Royale des Sciences, 1783.

8°: π^4 A-N⁸, 108ℓ.; [i]-viii, [1]-208 p., one wood engraved textvignette. PAGE SIZE: 193 x 120 mm.

VERY SCARCE. One of the author's most important books, which is concerned with the volcanoes of the Lipari Islands in southern Italy. This account of the volcanic activity in the Lipari Islands was, with his other volcanic researches, 'a worthy continuation' of Sir William Hamilton's work. Unlike his predecessors, Dolomieu did not confine himself to describing the superficial aspects of volcanic mountains and their eruption but studied lavas, loose ejecta, sublimations, etc., and compared these volcanic products with other rocks. He showed that all transitional stages exist between the coarsely crystalline lavas and the glassy rocks and confirmed the igneous origin of basalt. The Dolomites are named after him (Zittel pp. 96-97).

REFERENCES: DSB: 4, 150. • LKG: XIV 698. • Ward & Carozzi, *Geology Emerging*, 1984: no. 668. • Zittel, *History of Geology*, 1901: pp. 96-98.

1426. — French, 1788.

Histoire naturelle de la France meridionale ou recherches sur la mineralogie du Vivarais, du Viennois, du Valentinois, du Forez de l'Auvergne etc. Paris, 1788.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 371.

1427. — French, 1788.

Mémoire sur les îles Ponces et catalogue raisonné des produits de l'Etna pour servir à l'histoire des volcans suivis de la description de l'éruption de l'Etna, du mois de Juillet 1787 par Déodat de Dolomieu; ouvrage qui fait suite au Voyage aux Îles de Lipari, 1 vol. in 80. du même auteur ... A Paris, Chez Cuchet ..., 1788.

8°: π^4 A-I⁸ χ^1 K-Kk⁸ (fold. table fol. 2G5, 4 fold. maps at end); 267ℓ.; [2], vi, 525, [2] p., folding table, 4

folding maps. Title vignette; head-pieces.

VERY SCARCE. Descriptions of volcanoes and eruptions, with special reference to Mt. Etna's eruptions in July, 1787. Included is a descriptive catalog of the geological objects Dolomieu collected during his visit.

REFERENCES: LKG: XIV 700b.

Beiträge zur Mineralogie von Italien. (Frankfurt am Mainz, 1789).

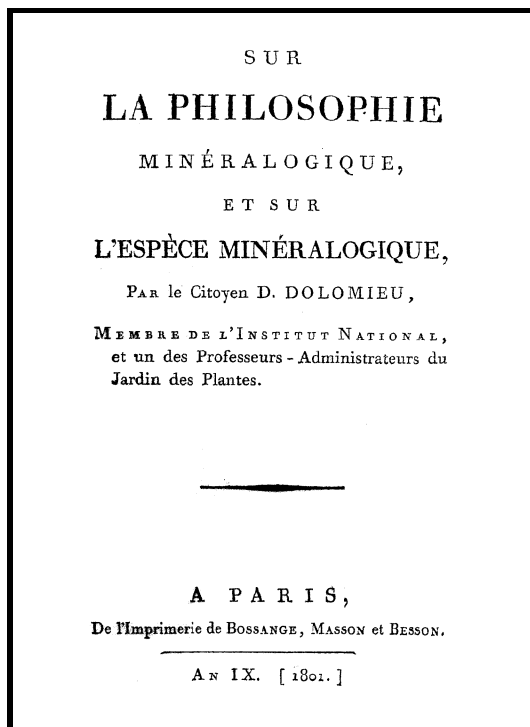
See: Beiträge Zur Mineralogie.

1428. — Latin, 1790.

Memoria del Sgu. Abb. Alb. Fortis al S. Deod. de Dolomieu, sopra le Minere di Carbone de Sogliano. Cesena, 1790.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 544.



SUR LA PHILOSOPHIE MINÉRALOGIQUE, 1801

1429. — French, 1801 [First edition].

Sur | La Philosophie Minéralogique, | Et Sur | L'Espèce Minéralogique, | Par le Citoyen D. Dolomieu, [...3 lines of titles and memberships...] | [tapered rule] | A Paris, | De l'Imprimerie de Bossange, Masson et Besson. | [rule] | An IX. [1801.]

8°: A-H⁸; 64ℓ.; [1]-128 p.

CONTENTS: [1]-2], Title page, verso blank.; [3]-10, "Avant-Propos."; [11]-20, "Sur La Philosophie Minéralogique."; [21]-122, "... Sur L'Espèce Minéralogique."; [123]-128, "Sommaire."

RARE. This book, Dolomieu's last, examines the defects in previously published mineral classification systems and attempts to define the direction mineralogy should take to frame a correct system. When it was written, practical mineralogy was distinguished from philosophical mineralogy. The latter term as used in the title of this work refers to the investigation of mineralogical properties such that general truths about all minerals may be deduced.

After a short introduction, in which the philosophy of mineralogy is defined, Dolomieu considers in this work the nature, concept and definition of "mineral species." In the text he reflects upon the prevailing knowledge and theories, and discusses mineralogical species in general, why do species exist, the chemical makeup of minerals, what represents a mineral species, what modifies a species, the properties of minerals, analogs to mineral species, the classification of mineral species, improper mineralogical species and Dolomieu's definition of a mineral species.

REFERENCES: *Edinburgh Review*: 4 (1808), 289-96. • LKG: XII 200.

1430. German transl., 1802: D. Dolomieu | [...2 lines of titles and memberships...] | Ueber die | Philosophie der Mineralogie | und über | das mineralogische Geschlecht, | nebst | einigen Nachrichten über das Leben dieses | Gelehrten. | [ornate rule] | Aus dem Französischen übersetzt. | [tapered rule] | Hamburg und Mainz, | bey Gottfried Vollmer, | 1802.

8°: π^8 1-9⁸ 104; 84ℓ.; [i]-xvi, [1]-151, [1] p. PAGE SIZE: 176 x 104 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Sectional title page, "Ueber | die philosophische Mineralogie | und das | mineralogische Geschlecht."; [iv], Blank.; [v]-xvi, "Vorerinnerung."; [1]-12, "Von der mineralogischen Philosophie."; 13-140, "Von der mineralogischen Philosophie und | der mineralogischen Gattung."; [141]-151, "Vorzüglicher Inhalt."; [1] pg, Blank.

RARE. German translation from *Sur la Philosophie Minéralogique* (Paris, 1801). According to the title page, there is included in the text an account of the life of Dolomieu. However, the copy examined appeared to be a direct translation from original French edition with little or no additional commentary, and no life of Dolomieu.

REFERENCES: LKG: XII 201a.

Beschreibung einer Sammlung von meist vulcanisirten Fossilien, die Deodat-Dolomieu im Jahre 1791 von Maltha aus nach Augsburg und Berlin versandte mit verschiedenen dadurch veranlassten Aufsätzen herausgegeben von Karl Wilhelm Nose. Frankfurt am Main, In der Gebhard- und Korberschen Buchhandlung, 1797.

See: Nose, Karl Wilhelm.

1431. — German, 1792.

Briefe zweier ausländischer Mineralogen über den Basalt. Zurich und Lipzig, 1792.

8°:

RARE. Letters between foreign mineralogists on the mineralogical origin of basalt.

REFERENCES: LKG: XVI 119.

1432. — French, 1784.

Memoire sur les Tremblemens de terre de la Calbre pendant l'année 1783 par Déodat de Dolomieu. Rome, A. Fulgoni, 1784.

8°: 70 p.

VERY SCARCE. About an earthquake that occurred in Calabre in 1783 that Dolomieu experienced.

REFERENCES: LKG: XIV 556*.

1433. — Italian, 1784 [Italian transl.].

Memoria del Commendatore Deodato de Dolomieu sopra itremuoti della Calabria nello Anno 1783, tradetto del Frances. Rome, 1784.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 557a.

1434. — German, 1789 [German transl.].

Abhandlung über das Erdbeben in Calabrien im Jahr 1783. Aus dem Französischen von Deodat de Dolomieu ... Leipzig in der Joh. Gottfr. Müllerschen Buchhandlung, 1789.

8°: 80 p.

VERY SCARCE. Translation of *Mémoire sur les tremblemens de terre de la Calabre pendant l'année 1783*.

REFERENCES: LKG: XIV 558b.



DOMEYKO

DOMEYKO, Ignacio. (BORN: Niedzwiadka, Near Nowogrodck, Poland, 31 July 1802; DIED: Santiago, Chile, 23 January 1889) *Polish mineralogist & naturalist.*

Domeyko's original Polish name was Żegota Domejko. He studied natural history at the University of Wilno from 1817 to 1822; however, after taking part in a Polish insurrection against the Russian authorities, he was obliged in 1831 to emigrate to France. There he continued his education at the Sorbonne under Jean Dumas [1800-1884] and F.S. BEUDANT and at the École des Mines under O.P.A.P. DUFRENOY and Jean Elié de Beaumont [1798-1874]. He was appointed professor of chemistry and mineralogy at the college in Coquimbo, Chile in 1838. Then in 1846 he accepted an appointment to the University of Santiago, 1846, rising to the position of University Chancellor in 1867. He made many excursions throughout South America studying natural history and mineralogy.

REFERENCES: ABE: I 272, 47-49; II 288, 323-326; III 199, 137. • *ISIS*, 1913-65: 1, 353. • Lambrecht & Quenstedt,

DOMEYKO

Catalogus, 1938: 117-8. • Mitchell, R.S., "Who's who in mineral names - Ignacio Domeyko (1802-1889)," *Rocks and Minerals*, **63** (1988), no. 5, 403-4, portrait. • Orgelbranda, *Encyklopedia Powszechna*, 1898-1912: 4, 426, portrait. • Poggendorff: **3**, 370 & **4**, 340. • *Polski Słownik Biograficzny*: 5, 313-8 [by K. Maślankiewicz & T. Turkowski]. • Sarjeant, *Geologists*, 1980: **2**, 912 & Suppl. 2 (1995), 1, 583. • WBI. • *World Who's Who in Science*: 471.

1435. — Spanish, 1845 [First edition].

Elementos | De | Mineralogia, | por | Ignacio Domeyko, | [...2 lines of titles and memberships...] | [ornate rule] | Serena, | Imprenta Del Colegio. | — 1845. —

8°: π^4 A-Z⁸; 195 ℓ .; [i]-vi, [2], [1]-382 p.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "A La Juventud Chilena."—signed Ignacio Domeyko, 18 September 1845.; [1 pg], "Advertencia."; [1 pg], Blank.; [1]-382, Text.

VERY RARE. "This valuable manual is dedicated to the youths of Chile. No one has done so much towards developing the mineralogy of that country as Prof. Domeyko; and his researches have been rewarded by the discovery of several new species. His work has a special value on account of its fullness upon the ores and mineral products of his adopted land." (AJS Review).

REFERENCES: *American Journal of Science*: 2nd series, **15** (1853), 431. • BL: [7104.b.19.]. • Dana's 7th (Bibliography): 70. • Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 643 [not seen].

1436. 2nd edition, 1860: Elementos | de | Mineralojia, | o del | conocimiento de las especies minerales en jeneral, i en particular de las de Chile | Por Ignacio Domeyko, | Miembro de la le Universidad de Chile, | Profesor de Quimica i Mineralojia en el Instituto | de Santiago. | [rule] | Segunda Edicion. | [rule] | Santiago. | [rule] | Imprenta del Ferrocarril, | Calle de Teatinos, núm. 34. | [rule] | Año 1860.

4°: π^5 1-54⁴; 222 ℓ .; [i]-xi, [1], [1]-432 p., 6 plates of crystal drawings. PAGE SIZE: 240 x 150 mm.

CONTENTS: [i-ii], Half title page, "Mineralojia," verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "A La Juventud Chilena."—signed Ignacio Domeyko 18 September 1845.; [vii], "Advertencia. Que se dio en la Primera Edicion."; [x]-xi, "Advertencia (Para esta segunda edicion.)"—dated 18 September 1860.; [1 pg], Blank.; [1]-47, Text of preliminary introduction to mineralogy.; [48], Abbreviations.; [49]-364, Text of systematic mineralogy.; [365]-400, List of Chilean minerals as a descriptive mineralogy.; [401]-403, "Nota sobre las Formuas de Composicion usadas en esta obra."; [404], Blank.; [405]-411, Table of contents.; [412], Blank.; [413]-421, "Indice Alfabético."; [422], Blank.; [423]-429, Additions.; [430], Blank.; [431]-432, "Fe de Erratas."; [At end], 6 plates of crystal drawings.

VERY SCARCE. The author's second expanded edition of his *Elements of Mineralogy*. Although written as a general textbook, Domeyko has put considerable effort into fully describing and emphasising the mineral species found in Chile and other countries of South America.

Six supplements to this work appeared before the third edition was published in 1879. These are listed below:

Suppl. 1, 1860: Primer Apendice ... Santiago, 1860.

Suppl. 2, 1867: Secundo Apendice ... Santiago, 1867. 54 p.

Suppl. 3, 1871: Tercer Apendice ... Santiago, 1871. 58 p.

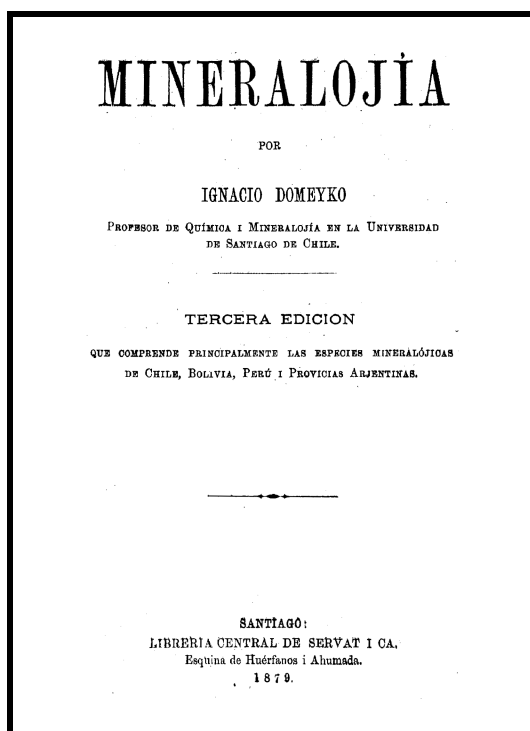
Suppl. 4, 1874: Quarto Apendice ... Santiago, 1874. 57 p.

Suppl. 5, 1876: Quinto Apendice ... Santiago, 1876. 79 p.

Suppl. 6, 1878: Sexto Apendice ... Santiago, 1878. 48 p.

REFERENCES: BL: [7104.e.4.]. • Dana's 7th (Bibliography): 70. • Fleszarowa, *Bibliografia Geologiczna Polski*,

1966: no. 643. • Maffei & Rua Figuera, *Bibliografia Mineral*, 1871-2: **1**, 198. • NUC: **146**, 288-89.



MINERALOJÍA, 1879

1437. 3rd edition, 1879: Mineralojia | Por | Ignacio Domeyko | Profesor de Química i Mineralojia en la Universidad | de Santiago de Chile. | [rule] | Tercera Edicion | Que Comprende Principalmente Las Especies Mineralójicas | De Chile, Bolivia, Perú I Provincias Argentinas. | [ornate rule] | Santiago: | Libreria Central De Servat I Ca. | Esquina de Huérfanos i Ahumada. | 1879.

8°: π^9 1-47⁸ 48⁵; 390 ℓ .; [I]-XVIII, [1]-762 p., 6 plates (showing crystal drawings). PAGE SIZE: 238 x 154 mm.

CONTENTS: [I-II], Half title page, "Mineralojia," verso blank.; [III-IV], Title page, verso "Es Propiedad De Los Editores | ..."; [V]-XVIII, "Introduccion."—dated 1 December 1879.; [1]-687, Text.; [688], Blank.; [689], Sectional title page, "Lista | De | Las Especies Minerales | Que Se Han | Descubierto Hasta Ahora En Chile, | Peru, Bolivia I Provincias Argentinas."; [690], Blank.; [691]-740, Text.; [741]-748, "Indice De Las Materias."; [749]-760, "Indice Alfabético."; [2 pgs], "Fé De Erratas."; [At end], 6 plates.

VERY SCARCE. Since the appearance of the second edition of Domeyko's *Mineralojia*, six appendixes and numerous articles had appeared to keep the work up to date. At the time, this was the best authority on the mineralogy of Chile, Peru, Bolivia and portions of Argentina, and when this edition became available it was immediately recognized as a major work. It is written as a textbook with the preliminaries covering the basic definitions, morphological crystallography, fracture, cleavage, texture, color, and chemical characters. The second part of the work is a standard descriptive mineralogy, arranged on the four classes of (1) metals, (2) minerals with no contained metals, (3) silicates and (4) combustibles. The text incorporates a large number of new facts, due mostly to the labors of the author himself.

The minerals of Chili and the neighboring republics are in many cases of peculiar interest, and the knowledge of their mineralogy is the result of the author's efforts in spreading the results of his investigations through his publications.

Three supplements to this work were published.

Suppl. 1, 1881: Primer Apendice: Nuevas investigaciones en el reino mineral Chile i de las Republicas vecinas, in: *An. Universid. Chile*, 1881, pp. 5-48.

Suppl. 2, 1883: Secundo Apendice ... Santiago, 1883. 55 p., 2 plates.

Suppl. 3, 1884: Tercer Apendice ... Santiago, 1884. 41 p.

REFERENCES: *American Journal of Science*: 3rd Series, 21 (1881), 161. • BL: [7105.e.2]. • *Bulletin de la Société Française de Minéralogie*: 4 (1881), 33-4 [review]. • Dana's 7th (Bibliography): 70. • Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 643. • *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*: 1 1881, 170-1 [review]. • *Verhandlungen Geologischen Reichsanstalt*, Wien: 1882, 123-4.

1438. — French, 1889 [Collection catalog].

Catalogue de la Collection Minéralogique du Chili, envoyée à l'Exposition Universelle de Paris de 1889 par la Section de Minéralogie de la Commission de l'Exposition Chilienne. Santiago, 1889.

8°: 84 p.

EXTREMELY RARE. Catalog of a collection of mineralogical and geological samples displayed by the Republic of Chile at the Universal Exposition held in Paris in 1889.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 696. • *Kosmos*: 14 (1889), 260-1 [review].

1439. — Spanish, 1897.

Mineralojía | Por | Ignacio Domeyko | [...2 lines of titles and memberships...] | [ornate rule] | Edicion Oficial | Comprende Principalmente Lás Especies Mineralójicas | De Chile, Bolivia, Perú I Provincias Arjentinas | [rule] | Primera Pare | Minerales Metálicos | [rule] | Segndo Tomo | [rule] | Santiago De Chile | Imprenta Cervantes | Bandera, 73 | [short rule] | 1897.

5 vols. [VOL 1] Not seen. [VOL 2: 1897] 8°: [i]-xx, [1]-501, [1] p., 15 plates (crystal drawings). [VOL 3: 1897] 8°: [1]-435, [1] p., 6 plates (crystal drawings). [VOL 4: 1900] 8°: [2], [1]-559, [1] p., 5 folding plates (cross sections & maps). [VOL 5: 1903] 8°: [1]-457, [1] p., 8 folding plates (cross sections & maps).

CONTENTS: [Vol 1] Not seen.

[Vol 2] [i-ii], Half title page, "Mineralojía," verso blank.; [iii-iv], Title page, verso blank.; [v]-xx, "Introduccion | Sombre El Estado Actual Del Conocimiento Del Reino Mineral | De Chile, Bolivia, Perú I Provincias Arjentinas (a)."; [1]-81, "Caractères De Los Minerales."; [82], Blank.; [83]-475, Text (=descriptive mineralogy.); [476], Blank.; [477]-501, "Índice De Las Materias."; [1 pg], Blank.; [At end], 15 plates of crystal drawings, numbered I-XV.

[Vol 3] [1-2], Half title page, "Mineralojía," verso "19,372.—Imp. Cervantes, Bandera 73."; [3-4], Title page, verso blank.; [5]-413, Text (=descriptive mineralogy continued.); [414], Blank.; [415]-418, "Índice De Materias."; [419]-435, "Índice Alfabético."; [1 pg], Blank.; [At end], 6 plates of crystal drawings, numbered I-VI.

[Vol 4] [2 pgs], Title page, verso "21,167.—Imp. Cervantes, Bandera 46."; [1], "I | Ensayo | Sobre Los

Depósitos Metalíferos De Chile."; [2], Blank.; [3]-10, "I | Ensayo | Sobre Los Depósitos Metalíferos De Chile, Con Relacion | A Su Jeolojía I Configuracion Exterior."; [11]-554, Text.; [555]-559, "Índice De Materias."; [1 pg], Blank.; [At end], 5 folding plates showing cross sections and maps, numbered Lam I-V.

[Vol 5] [1-2], Title page, verso blank.; [3]-453, Text of geology treatise.; [454], Blank.; [455]-457, "Índice."; [1 pg], Blank.; [At end], 8 folding plates showing geological maps and cross sections, numbered I-VIII.

VERY RARE. This is the official edition of Domeyko's works, for which it is not clear that the first volume was ever issued; however, see the next entry. Otherwise this monumental work is a remarkable and largely unknown book that has a comprehensive description of the principal minerals and geology of Chile, Bolivia, Peru and several provinces of Argentina. The first two volumes concern mineralogy and act as a general text book on the science, together with a long descriptive mineralogy. Here the various mineral species known to occur in these region of South America are given together with physical and chemical details and notes on their localities. Volumes four and five treat methods of assaying and the geology of the region.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: [not mentioned]. • NYPL Catalog.

1440. — Spanish, 1898.

Tratado de ensayes tanto por la vía seca como por la vía húmeda, de toda clase de minerales i pastas de cobre, plomo, plata, oro, mercurio, etc.; con descripcion de los caractères de los principales minerales i productos de las artes en América i en particular de Chile, por Ignacio Domeyko. Ed. oficial. Primer tomo. Santiago de Chile, Impr. Cervantes, 1898.

8°: 701 p., 8 folding plates.

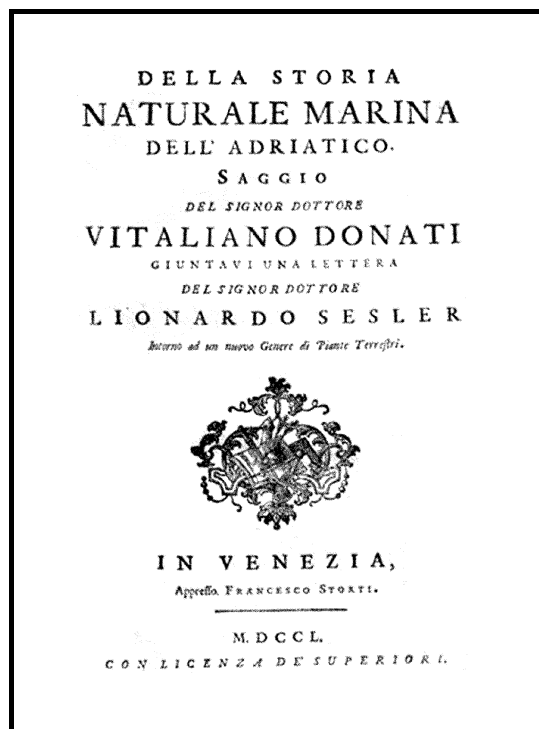
VERY RARE. Edited by Daniel Palacios Olmedo, this treatise on the assaying of ores is perhaps volume one of the official edition of Domeyko's works [which see previous entry].

REFERENCES: BL. • NUC.

DONATI, Vitaliano. (BORN: Padova, Italy, 1717; DIED: Mar Arabico, near Mangalore, 1762) *Italian naturalist & traveler.*

Concluded the studies of medicine and philosophy to Padova, was dedicated to the natural history and archaeology. To Rome, to the continuation of Giovanni Poleni, it received from Benedict XIV the assignment of reperire material profits to the preparation of a museum of natural history to the Wisdom. Donati to you was addressed towards the coast Dalmatian, experience that said its greater fruits in Of the marine natural history of Adriatic (1750). University professor of botany to Turin from 1750, died during a travel in East to the exemplary search assigns you to the realization of the city museum of antiquity orients them, first nucleus of the future Turinese Egizio Museum.

REFERENCES: ABI: I 371, 87-113; II 213, 326. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • DBA: I 247, 352-356. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Mieli, *Gli Scienziati Italiani*, 1921. • Poggendorff: I, col. 590. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.



SAGGIO, 1750

1441. — Italian, 1750 [First edition].

Della | Storia | Naturale Marina | Dell' Adriatico | Saggio | Del Signor Dottore | Vitaliano Donati | Giunta una Lettera | Del Signor Dottore | Lionardo Sesler | Intorno ad un nuovo Genere di Pianta Terrestre. | [ornament] | In Venezia, | Appresso Francesco Storti. | [rule] | M. DCCL. | Con Licenza De' Superiori.

4°: π^4 A-I⁴ K⁵; 45 ℓ .; [8], [I]-LXXXI, [1] p., 10 engraved plates (numbered I-X; in some states, all the plates are hand colored).

CONTENTS: [2 pgs], Title page, verso blank.; [5 pgs], Dedication to Maupertuis, dated 4 March 1750.; [1 pg], "Indice."; I-LXXXIX, Text.; LXXX-LXXXI, "Indice."; [1 pg], Blank.; [At end], 10 plates.

RARE. Edited by Count Giovanni Rinaldo Carli [??-??].

Donati began a natural history expedition to the east but died en route. The observations he made before his death are contained in this work.

Facsimile reprint, 1999: C. Gibin Il Saggio della storia marina dell'Adriatico: una ricerca pionieristica Prefazione all'opera di V. Donati "Della storia naturale marina dell'Adriatico" T & G Edizioni Padova 1999.

In order to honor the dead it printed to Lucca in 1750 the Private disavowment of a woman of true spirit, but it had to destroy the edition for the participation of a doctor, ritenutosi defamed from some appreciations expressed in the work; endured after it was found implied in the famous controversy on the magic, that it followed to the publication of Of the nocturnal conference of

the Tartarotti, in the which volume, in appendix, the Tartarotti had printed its epistle on the wizards and the witches, with a confutazione in which, between the other, it advanced the suspicion that the thesis of the Carli was from considering itself heretical. The Carli it alleged to have written to the Tartarotti not to publish the dissertation, but these it denied to never have received the letter. In the controversy, that it attests the spread caught up from the Italian rationalism, the Carli - than but it endured only some attack from Jesuits of Venice - much marginal part had, and was defended from the Maffei. The episode but admonished it to star far away from the radical positions which, of the rest, its nature did not tilt. It found comfort and svago, then, in some travels, between which one along the istriane coasts, where he studied the amphitheater Roman of Pola, having for companion the friend and Vitagliano naturalist Donato to you. These just account in the volume Of the marine natural history of the Adriatic collected the fruit of the completed searches in order, than the Carli it published to own expenses (Venice 1750).

The Carli, become rich, it was discharged, in 1750, from the chair of Padova, than it did not answer to its real interests, and from the other engagements that it had in that city and it published, the year after, its first studies on the debated monetary issue, Of the origin and the commerce of the coins and the institution of the zecche of Italy (the Haya [but Venice] 1751).

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 2, 251. • BL: [456.b.10.]. • BMC: 1, 472 [hand colored plates]. • LKG: XIV 637. • Nissen (ZBI): no. 1137. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2370. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 1500.

1442. French transl., 1758: Essai | Sur | L'Histoire Naturelle | De | La Mer Adriatique | Par Le Docteur | Vitaliano Donati, | Avec Une Lettre Du Docteur | Leonard Sesler | Sur Une | Nouvelle Espèce | De | Plante Terrestre, | Traduit De L'Italien. | [ornament] | A La Haye, Chez Pierre De Hondt. | M. DCC. LVIII.

4°: π^3 A-K⁴; 42 ℓ .; [6], 1-73, [5] p., 11 engraved plates (in some states, all the plates are hand-colored).

CONTENTS: [2 pgs/= π lr], Title page, verso "Avertissement."; [3 pgs/= π 2r- π 3r], Dedictory letter.; [1 pg/= π 3v], "Avis au Relieur."; 1-73 (= π A-K2r), Text.; [5 pgs/= π K2v-K4v], "Catalogue de Livres."; [At end], 11 plates.

RARE. French translation by by Giovanni Francesco Mauro Melchiorre Salvemini di Castiglione [??-??] of *Della Storia Naturale Marine dell' Adriatico* (Venezia, 1750) with corrections supplied by the author and Leonardo Sesler's [†1785] letter on Vitaliana. "This edition counts for purposes of nomenclature" (Stafleu & Cowan).

REFERENCES: BL: [B.300.(5.)]. • BMC: 1, 472. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2370. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 1500.

1443. German transl., 1753: Auszug seiner Natur-Geschichte des Adriatischen Meers den Boden des Meers zu untersuchen, nebst Instrumenten in solcher Tiefe zu fischen, von Classen der Meerpflantzen, der Polyparen, der Thierpflantzen und Pflantzenthiere, oder Uebergang der Natur vom Pflantzenreiche zum Thierreiche ... Halle, Francken, 1753.

8°: 71, [1] p., [2] leaves of plates. Special half-title for Sesler's work. Includes bibliographical references and index. RARE.

REFERENCES: BL: [no copy listed]. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 1500.

DOULCET, M. French physician.

Doulcet was a doctor, who had a medical practice in Clermont-Ferrand.

1444. — French, 1806.

Dictionnaire Oryctographique, ou Description de

toutes les substances connues, qui sont sur la surface ou dans le sein de la terre, avec leur analyse et une table des pesanteurs spécifiques des minéraux, celle de l'eau étant supposed a 10,000. Par M. Doulcet ... Paris, Bérin, Richard et Volland, 1806.

8°: viii, 240, [14] p.

VERY RARE. This comprehensive dictionary of mineralogy and oryctography includes long sections on crystallography, precious stones, metals, salts, inflammables and the chemical analysis of species.

REFERENCES: BL: [no copy listed]. • LKG: VIII 18. • NUC: 147, 683. • Roller & Goodman, *Catalogue*, 1976: 1, 333. • Ward & Carozzi, *Geology Emerging*, 1984: no. 682.

DRAPIEZ, Pierre Auguste Joseph. (BORN: 1778; DIED: 1856) *Belgian geologist & mineralogist.*

Drapiez was a Belgian naturalist, instructor at the École Polytechnique in Paris, and the author of a number of encyclopaedic and didactic works.

REFERENCES: BAB: 197, 202-211. • Poggendorff: 3, 379. • WBI.

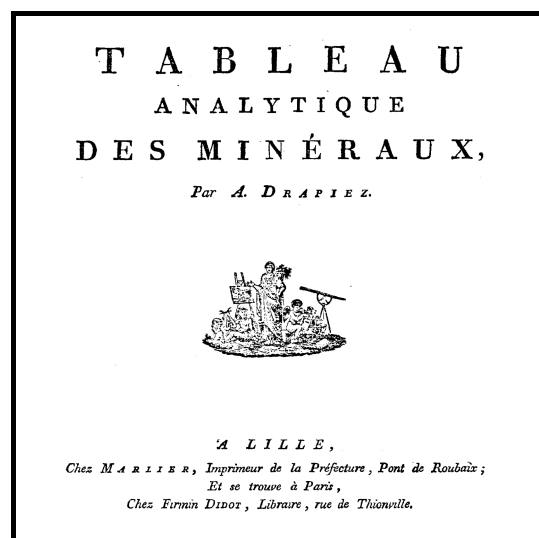


TABLEAU ANALYTIQUE DES MINÉRAUX, 1802

1445. — French, 1802.

Tableau | Analytique | Des Minéraux, | Par A. Drapiez. | [ornament] | A Lille, | Chez Marlier, Imprimeur de la Préfecture, Pont de Roubaix; | Et se trouve à Paris, | Chez Firmin Didot, Libraire, rue de Thionville.

Oblong 4°: A-D⁴; 16 ℓ .; [1]-31, [1] p., 10 double page tables (9 folding). PAGE SIZE: 255 x 330 mm.

CONTENTS: [1-2], Half title page, "Tableau | Analytique | Des Minéraux," verso blank.; [3-4], Title page, verso blank.; [5], Dedication to René Just Haüy.; [6], Blank.; [7]-12, Preface.; 13-25, "Notions Préliminaires."; 26-31, "Annotations Relatives à quelques Terms Employés dans le Tableau, ..."; [1 pg], Blank.

VERY RARE. This is Drapiez' classification scheme for ores and minerals. The preliminary text briefly describes physical and chemical properties before reviewing previous methods of mineral classification. This is followed by a discussion of the physical characteristics, such as elasticity, ductility, electrical and magnetic properties that can be used to classify minerals and ores. Drapiez then employs Lamarck's tabular method to mineralogy by segregating the mineral species into a series of ten very large (67 x 55 cm), double page tables. The tables are: (a) Distribution des Minéraux selon Haüy, (b) Tableau Analytique des Minéraux, Substances Acidifères, (c) Substances Terreuses, (d) Substances Combustibles non Métalliques, (e) Substances Métalliques, consisting of three tables, and three Appendices. Throughout Drapiez uses Haüy's classification system as a foundation.

Other issues & editions: Cole (1988) believes that the work went "through a number of editions." They are most likely reissues of the original text. They include, Paris, 1809 and Lille, n.d. [c1812].

REFERENCES: BL: [B.348.(9.) Paris, 1809 ed.]. • CBN: [S.1761 & S.5180]. • Cole, *Chemical Literature*, 1988: no. 386. • Leonard's *Taschenbuch*: 1 (1807), 325. • LKG: XII 181. • NUC: 148, 512 [ND 00367475].

1446. — French, 1823.

Coup-d'oeil Mineralogique et Geologique sur la Province du Hainaut, royaume des Pays-Bas. Bruxelles, P.J. de Mat, 1823.

8°: 164 p., illus.

VERY SCARCE. A topographical study on the geology and mineralogy of the province of Hainaut in southwest Belgium.

REFERENCES: NUC: 148, 512-3 [ND 0367463]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 685.

1447. — French, 1826.

Minéralogie | Usuelle, | Ou Exposition Succincte Et Méthodique | Des Minéraux, | De Leurs Caractères, De Leurs Gisemens Et De | Leurs Applications Aux Arts Et A L'Économie. | Par M. Drapiez. | [ornament] | Paris, | A La Librairie Scientifique Et Industrielle | De Malher Et Cie, | Passage Dauphine. | [rule] | 1826.

12°: π^2 1-21¹²; 254 ℓ .; [4], [1]-504 p., index. PAGE SIZE: 60 x 92 mm.

CONTENTS: [2 pgs], Series title, "Bibliothèque Industrielle. | [tapered rule] | Sciences.," verso "Bruxelles. | Chez Berthod, Libraire, | ..."; [2 pgs], Title page, verso blank.; [1]-43, Introduction to mineralogy.; [44]-484, "Description | des | Espèces Minérales, | D'Après La Distribution Méthodique | De Haüy."

VERY SCARCE. A standard text that follows the theories of René Just Haüy in its description and classification of minerals. The text concentrates on the practical aspects of minerals in industry and technology.

REFERENCES: NUC: 148, 512-3 [ND 0367469].

Nouveaux Éléments de Minéralogie, ou Manuel du Minéralogiste Voyageur, contenant des Notions Élémentaires sur la Minéralogie, et la description des Espèces Minérales connues, avec leurs principaux usages, etc. Par Brard. Nouv.

DRÉE

Éd., rev. et augm. d'un indicateur Minéralogique, par Drapiez. (Bruxelles, 1838).

See: Brard, Cyprien Prosper.

1448. — French, 1863.

Guide Pratique De Minéralogie Usuelle. Paris, Eugène Lacroix, 1863.

12°: 504 p.

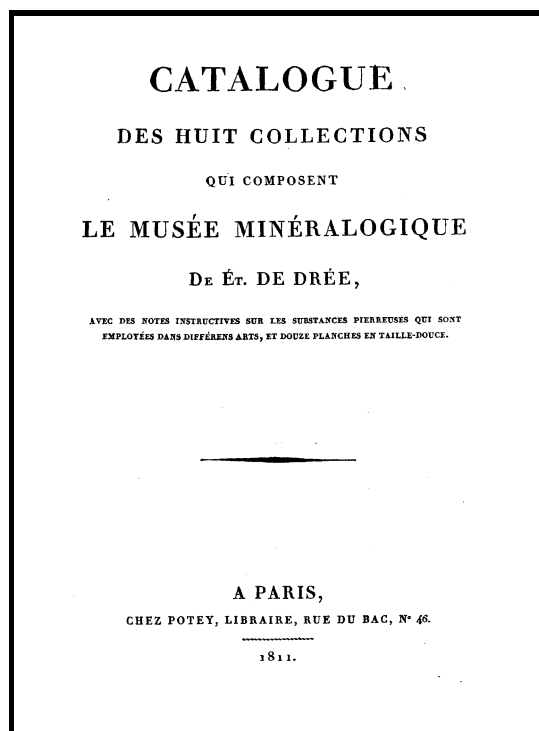
RARE. This *Practical Guide to Useful Minerals* is a succinct treatment of the science of mineralogy, their physical characters, their chemical composition, their varieties, and their applications in art and industry. Published as a volume in the Library of Industrial and Agricultural Professions, Series D, N 15.

REFERENCES: BL. • NUC.

DRÉE, Étienne Gilbert, Marquis de. (BORN: 1760; DIED: 1848) *French nobleman.*

Drée was the brother-in-law of the mineralogist D. DOLOMIEU and treasurer of the States of Languedoc. He purchased the mineralogical portion of the natural history cabinet of Baron Joubert, to which he made considerable additions.

REFERENCES: ABF: I 328, 324-326. • Cleavelly, *World Palaeontological Collections*, 1983: 105. • Laissus, *Cabinets d'Histoire Naturelle*, 1964. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 168.



CATALOGUE DES HUIT COLLECTIONS, 1811

1449. — French, 1811 [Collection catalog].

Catalogue | Des Huit Collections | Qui Composent | Le Musée Minéralogique | De Ét. De Drée, | Avec Des Notes Instructives Sur Les Substances

Pierreuses Qui Sont | Employées Dans Différens Arts, Et Douze Planches En Taille-Douce. | [tapered rule] | A Paris, | Chez Potey, Libraire, Rue Du Bac, N° 46. | [wavy rule] | 1811.

8°: π^2 1-384; 154 ℓ .; [4], [1]-304 p., 12 plates (numbered I-XII). PAGE SIZE: 272 x 210 mm.

CONTENTS: [2 pgs], Half title page, "Musée Minéralogique," verso "De L'Imprimerie De Crapelet."; [2 pgs], Title page, verso blank.; [1]-4, "Objet Et Plan Du Musée."; [5]-290, Text.; [291]-294, "Supplément."; [295]-301, "Table | Par Ordre De Collections Et De Matieres Des Objets | Contenus Dans Ce Volume."; [302], "Errata."; [303]-304, "Explication Des Planches."; [At end], 12 plates.

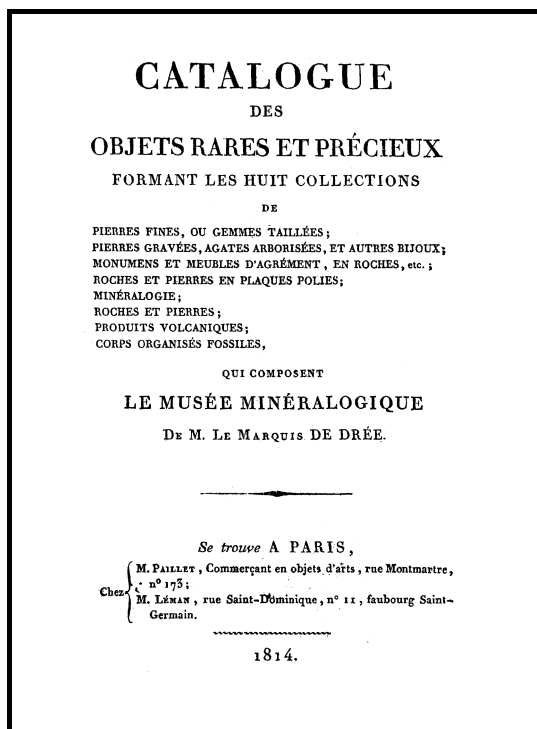
PLATES: The plates figure cut gems, intaglios, vases, engraved gems, marble ornaments and statues.

RARE. A remarkable catalog of a large and famous collection of minerals, fossils, gems, rocks and objects made from stone. Based on the text, Drée divided his museum into eight collections dealing with: I. Mineralogy. II. Rocks and Stones, including meteorites. III. Products of Volcanoes, such as lava, basalt and other ejecta. IV. Fossilized Organic Bodies. V. Rocks, Stones and ornamental plaques made of stone, including jades, marbles, alabaster, malachite and hematite. VI. Precious Gems. VII. Engraved Stones and Agates. VIII. Monuments and Statues carved in stone. Through out the text, Drée has added a good commentary that enhances the specimen descriptions. The supplemental material at the end describes the latest additions to his collection including precious stones, engraved agates and monuments. The twelve fine plates by the designer La Guiche and engraved by Lecerf illustrate some of the better specimens from the collection including faceted gems, a fine dendritic agate, engraved gems and other ornamental objects. Over the years through auctions Drée sold off various sections of his museum; however, the mineral collection consisting of about 15,000 specimens was ultimately acquired *en bloc* by the Musée de Minéralogie de l'École Nationale Supérieure des Mines in Paris in 1845.

REFERENCES: Burchard, *Mineral Museums*, 1986: p. 78. • Dana's 7th (Bibliography): 69. • LKG: XV 52. • Partsch, *Katalog der Bibliothek*, 1851: no. 465. • Sinkankas, *Gemology Bibliography*, 1993: no. 1779.

1450. — French, 1814 [Collection catalog].

Catalogue | Des | Objects Rares Et Précieux | Formant Les Huit Collections | De | Pierres Fines, ou Gemmes Taillées; | Pierres Gravées, Agates Arborisées, Et Autres Bijoux; | Monumens Et Meubles D'Agrément, En Roches, etc.; | Roches et Pierres en Plaques Polies; | Mineralogies; | Roches et Pierres; | Produits Volcaniques; | Corps Organisés Fossiles, | Qui Composent | Le Musée Minéralogique | De M. Le Marquis De Drée. | [tapered rule] | Se trouve A Paris, | [The following four lines braced on the left by "Chez {":] M. Paillet, Commerçant en objets d'arts, Rue Montartre, | N° 173; | M. Léman, rue Saint-Dominique, N° 11, faubourg Saint- | Germain. | [ornate rule] | 1814.



CATALOGUE DES OBJETS RARE, 1814

8°: π^2 1-88 95; 72 ℓ .; [2], [1]-139, [1] blank, [2] p.
PAGE SIZE: 198 x 112 mm.

CONTENTS: [2 pgs], Title page, verso "De L'Imprimerie De Crapelet."; [1], "Avis."; 2, "Indications des Abréviations."; [3]-139, Text.; [1 pg], Blank.; [1 pg], "Table Des Collections."; [1 pg], "Errata."

RARE. One of several catalogs describing part of the extensive mineral and gem collection formed by the Marquis Drée. This particular volume describes the gemstones and other gem material of the collection. The first portion describes 300 specimens of cut gemstones such as diamond, ruby, sapphire, topaz, peridot, emerald, aquamarine, garnet, and many other species. The second part describes 286 specimens of a wide variety of engraved gems, agates with dendrites and other ornamental stones. Section three covers massive stones like lapis lazuli, jade and jadeite, amazonite, rock crystal, etc. A final section, describes plaques made of polished stones.

REFERENCES: Partsch, *Katalog der Bibliothek*, 1851: no. 466. • Sinkankas, *Gemology Bibliography*, 1993: no. 1780.

1451. — French, 1816 [Collection catalog].
Catalogue | D'Objets Rares Et Précieux, |
Consistant: 1°. En Statues, Monumens antiques,
Colonnes, Vases, | Trépieds, Cheminées, Pendules,
Tables, etc., en granit, | porphyre, lapis, serpentine
et marbres les plus beaux, etc., | 2°. En
Pierres gravées antiques et modernes, en agates
| arborisées et en autre Pierres employées en

bijoux; | 3°. En Diamans, Rubis, Grenat, et
toutes espèces de Pierres | fines taillées, et du
plus beau choix; | 4°. En plaques polies d'agate,
jaspe, aventurine, granits, | brèches, marbres, etc.,
toutes de la plus belle qualité. | Ces Objets
Formant quatre Collections: | De Monumens et
Meubles d'Agrément en Roches, etc.; | De Pierres
Gravées, Agates Arborisées; | De Pierres Fines Ou
Gemmes; | De Roches et Musée Minéralogique
| De M. Le Marquis De Drée, | La Vente de
ces Objets aura lieu en son Hotel, rue St.-
Dominique, n° 11, le lundi 27 janvier 1817 et jours
| suivans; l'Exposition sera publique, à compter de
| Dimanche 19 janvier, depuis midi jusqu'à trois
heures. | Le Présent Catalogue se Distribue; |
Chez { ... | [double rule] | Nota. Les Personnes
qui auraient des motifs pour voir le Cabinet avant
| l'Exposition publique, sont priées de s'adresser
a l'un de ces trois Messieurs, | ou a M. Léman,
rue St.-Dominique, Faubourg-St. Germain, n°. 11 |
[rule] | 1816.

8°: [2], [i]-vi, [1]-159, [1] p. PAGE SIZE: 184 x 120 mm.

CONTENTS: [2 pgs], Title page, verso advertisements where the copies of the catalog can be acquired.; [i]-v, Preface.; vi, Abbreviations.; [1]-158, Text.; 159, Errata.; [1 pg], Blank.

RARE. Auction catalog for a sale that commenced on January 27th, 1817 and continued for several days after. Sold where many if not all those objects from Drée's collection corresponding to his sections 6-8, including his precious gems, engraved stones and agates and his monuments and statues carved from stone.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 1781.



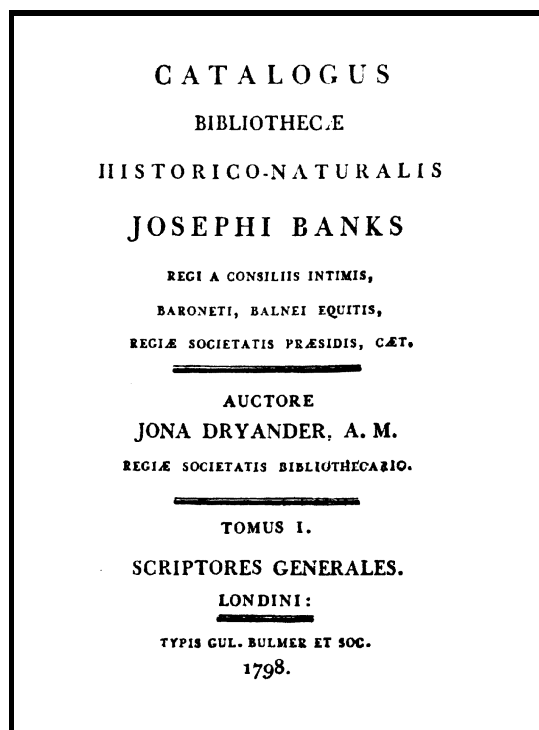
DRYANDER

DRYANDER

DRYANDER, Jonas Carlsson. (BORN: Gothenburg, Sweden, 5 March 1748; DIED: London, England, 19 October 1810) *English botanist & bibliographer.*

Dryander, a pupil of Linnaeus, arrived in London on 10 July 1777. Botanist and librarian to Joseph Banks from 1782, librarian of the Royal Society and Vice-President of the Linnean Society. Editor (and part writer) of *Aiton's Hortus Kewensis* (1st edn and part of 2nd edn), and author of a paper on Australian plants in *Ann. Bot.* (König & Sims) 2: 504532, 1806. His herbarium is housed at BM.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 343, 351-359. • Bridson, *History of Natural History*, 1994: no. D252. • Drugulin, *Sechstausend Portraits*, 1863: no. 1399. • Du Rietz, R., "More light on Jonas Dryander," *Svenska Linné-Sällskapets årsskrift*, 47 (1964), 82-3. • Uggla, A. Hj., "Jonas Dryander (1748-1810)," *Proceedings of the Linnean Society of London*, 156 (1944), 99-102. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



CATALOGUS, 1798

1452. — Latin, 1798-1800.

Catalogus | Bibliothecae | Historico-Naturalis | Josephi Banks | Regi A Consiliis Intimis, | Baroneti, Balnei Equitis, | Regiae Societatis Præsidis, Cæt. | [double rule] | Auctore | Jona Dryander, A.M. | Regiae Societatis Bibliothecario. | [double rule] | Tomus I. | Scriptores Generales. | Londini: | [double rule] | Typis Gul. Bulmer Et Soc. | 1798.

[TITLE TO VOLUME 2 READS:]

Catalogus | ... | Tomus II. | Zoologi. | ... | 1796.

[TITLE TO VOLUME 3 READS:]

Catalogus | ... | Tomus III. | Botanici. | ... | 1797.

[TITLE TO VOLUME 4 READS:]

Catalogus | ... | Tomus IV. | Mineralogi. | ... | 1799.

[TITLE TO VOLUME 5 READS:]

Catalogus | ... | Tomus V. | Supplementum | Et | Index Auctorum. | ... | 1800.

5 vols. [VOL 1: 1798] 8°: A⁴ B-X⁸ Y² (\$2 signed); 161ℓ.; [i]-vii, [1], [1]-309, [15] p. [VOL 2: 1796] 8°: A⁸ a² B-Qq⁸ Rr⁴ (\$2 signed); 314ℓ.; [i]-xx, [1]-578, [30] p. [VOL 3: 1797] 8°: A⁸ a⁴ B-Xx⁸ Yy⁷ (\$2 signed); 359ℓ.; [i]-xxiii, [1], [1]-656, [38] p. [VOL 4: 1799] 8°: π¹ A⁴ B-Dd⁸ (\$2 signed); 213ℓ.; [i]-ix, [1], [1]-390, [26] p. [VOL 5: 1800] 8°: π¹ B-Ll⁸ Mm² (\$2 signed); 267ℓ.; [2], [1]-513 (i.e., 531), [1] p.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-vii, "Elenchus Sectionum." [=table of contents].; [1 pg], Blank.; [1]-301, Text.; [302]-309, "Addenda."; [1 pg], Blank.; [14 pgs/=X4r-Y2v], "Index."

[Vol 2] [i-ii], Title page, verso blank.; [iii]-xx, "Elenchus Sectionum." [=table of contents].; [1]-569, Text.; [570]-578, "Addenda."; [30 pgs/=Pp6r-Rr4v], "Index."

[Vol 3] [i-ii], Title page, verso blank.; [iii]-xxiii, "Elenchus Sectionum." [=table of contents].; [1 pg/=a4v], Blank.; [1]-645, Text.; [646]-656, "Addenda."; [38 pgs/=Uu5v-Yy7v], "Index."

[Vol 4] [i-ii], Title page, verso blank.; [iii]-ix, "Elenchus Sectionum." [=table of contents].; [1 pg/=A4v], Blank.; [1]-381, Text.; [382]-390, "Addenda."; [26 pgs/=Cc4r-Dd8v], "Index."

[Vol 5] [2 pgs], Title page, verso blank.; [1]-127, Supplemental entries to volumes 1-4.; [128], Blank.; [129], Sectional title page, "[rule] | Index Auctorum. | [rule]."; [130], Blank.; [131]-497, Author index.; [498]-508, "Acta Academiæ Et | Societatum."; 509-521, "Anoyii."; [522]-524, "Codias Manuscripti."; [525]-513 (i.e., 531), "Addenda."; [1 pg/=Mm2v], "Explicatio Siglarum."

VERY SCARCE, published in an edition of 250 examples. This is a comprehensive, classified catalog of JOSEPH BANKS' extraordinary library of natural history works. Each of the first four volumes is devoted to a specific discipline: (1) general writings, including works on museums, (2) zoology, (3) botany, and (4) mineralogy. While the last volume contains supplemental titles to the four volumes and a comprehensive author index to the set. A particularly interesting fact about this fine library is that it was acquired by the British Museum *en bloc*, and the individual titles can still be examined there.

Facsimile reprint, 1966: Catalogus | Bibliothecae | Historico-Naturalis | Josephi Banks | Regi A Consiliis Intimis, | Baroneti, Balnei Equitis, | Regiae Societatis Præsidis, Cæt. | [double rule] | Auctore | Jona Dryander, A.M. | Regiae Societatis Bibliothecario. | [double rule] | Tomus I. | Scriptores Generales. | Londini: | [double rule] | Typis Gul. Bulmer Et Soc. | 1798. | The Sources Of Science, No. 22 | Johnson Reprint Corporation | New York and London | A. Asher & Co. | Amsterdam | 1966. 5 vols. Each volume is identical to the makeup of the original edition, except that a series title page, "The Sources Of Science | Number 22," two pages listing other titles in the series, and the original title page with additional text added below has been added.

Joseph Banks. (BORN: 1743; DIED: 1820) *English*

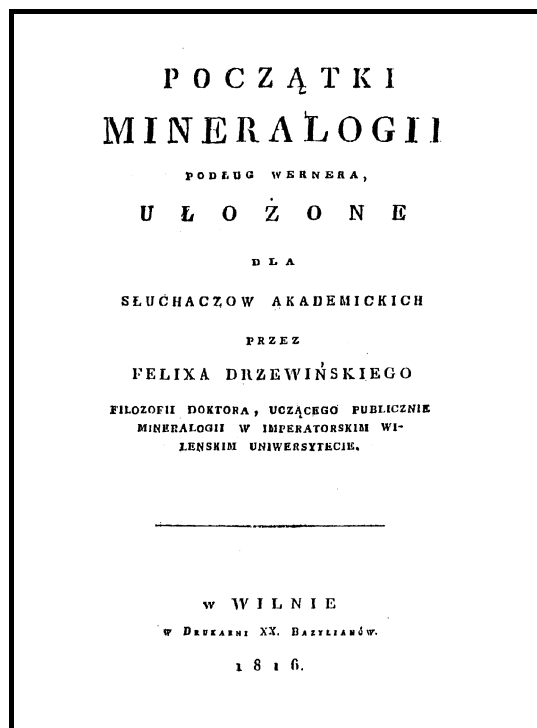
naturalist. Banks was educated at Harrow, Eaton, and Christ Church, Oxford; studied natural history, and accompanied Cook in his expedition round the world in the Endeavour, 1768–71, — upon his return, created hon. D.C.L. of Oxford; built a large collection of natural history objects including minerals, which are now preserved at the British Museum; visited Iceland, 1772; made baronet, 1781; F.R.S., 1766; president of the Royal Society, 1778–1820; first to observe that almost all Australian mammals were marsupials and more primitive than placental mammals of other continents; great patron of science, where his house in Soho Square became a frequent meeting place; plant genus “Banksia” named in his honor.

REFERENCES: *Freilich Sale Catalog*: no. 32. • LKG: I 21. • NUC. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 546. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 1534. (Banks) *Catalogue of Portraits of Naturalists*: 146-7 [32 portraits listed]. • DNB: 3, 129. • Poggendorff: 1, cols. 96-7 & 1532. • Thomas, *Dictionary of Biography*, 1884: 274. • *World Who's Who in Science*: 105.

DRZEWIŃSKI, Felixa. (BORN: 1788; DIED: Wilna, Poland, c1840) *Polish mineralogist & physicist*.

Drzewiński received his higher education at the University of Wilna, where he received his Ph.D. in philosophy in 1813. In 1815 he accepted the professorship of mineralogy at the University of Wilna. Later he taught physics at the same institution.

REFERENCES: Janowski, L., *Słownik bio-bibliograficzny dawnego Uniwersytetu Wileńskiego*. Wydany pod kierunkiem Ryszarda Mienieckiego przy współudziale Marty Burbianki i Bogumila Zwolskiego. (Zrodla i materialy historyczne. Wydawnictwa wydziału III T.V). Wilno, 1939. • Orgelbranda, *Encyklopedia Powszechna*, 1898-1912: 4, 499. • PBA: *Polskie Archiwum Biograficzne*: 81, 297 / 81, 298-306 / S42, 275-279. • *Polski Słownik Biograficzny*: 5, 422-3 [by A. Wrzosek]. • WBI.



POCZĄTKI MINERALOGII, 1816

1453. — Polish, 1816.

Początki | Mineralogii | Podług Wernera, | Ułożone | Dla | Słuchaczow Akademickich | Przez | Felixa Drzewińskiego | Filozofii Doktora, Uczącego Publicznie | Mineralogii W Imperatorskim Wileńskim Uniwersytecie. | [rule] | w Wilnie | w Drukarni XX. Bazylianów. | 1816.

8°: π^4 B-Z⁴ 2A-2Z⁴ 3A-3Z⁴ 4A-4D⁴ 4E-4F²; 312 ℓ .; [2], [i]-vi, [1]-615, [1] p. PAGE SIZE: 224 x 140 mm.

CONTENTS: [2 pgs], Half title page, “Początki | Mineralogii” verso “Dozwala ...”; [i-ii], Title page, verso blank.; [viii]-iv, “Przemowa.”; v, “Lista Dziel | Z Których Materye Tego Pisma Były Czerpae.”; vi, Abbreviations.; [1]-598, Text.; 599-607, “Nazwiska Mineralów.”; 608-615, “Nazwiska Ruskie.”

Translated title: Beginning mineralogy following Werner, prepared for the academic student by F. Drzewińskiego.

RARE. *Początki Mineralogii* is probably the first textbook concerning mineralogy in the Polish language. It was written out of necessity to accompany the author’s mineralogical course at the University of Wilna, there being no other suitable text in Polish.

The volume closely follows Wernerian principles by first discussing Oryctognosy or the physical characters of minerals, followed by relatively detailed descriptions of the minerals. A section on Geognosy is appended. The work finishes with Polish and Russian indexes to the minerals mentioned.

REFERENCES: Fleszarowa, *Bibliografia Geologiczna Polski*, 1966. • NUC: [no copy listed].

DU HAMEL (Duhamel), Jean Baptiste. (BORN: Vire, Normandy, France, 1624; DIED: Paris, France, 6 August 1706) *French theologian & anatomist*.

Du Hamel was priest to the congregation of Oratorium. First he was stationed at Neuilly sur Marne, later being appointed professor of philosophy at the Collège Royale de France in Paris. He was a confessor of the King. Member and secretary of the Academie des Sciences in Paris.

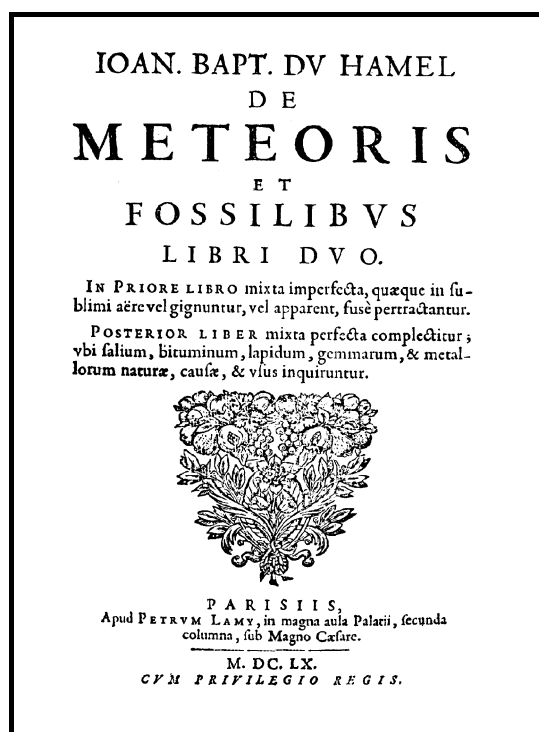
REFERENCES: DSB: 4, 221. • Poggendorff: 1, col. 616.

1454. — Latin, 1660.

Ioan. Bapt. Dv Hamel | De | Meteoris | Et | Fossilibus | Libri Dvo. | In Priore libro mixta imperfecta, quæque in sublimi aëre vel gignuntur, vel apparent, fusè pertractantur. | Posterior liber mixta perfecta complectitur; | vbi salium, bituminum, lapidum, gemmarum, & metallorum naturæ, causæ, & vsus inquiruntur. | [ornament] | Parisiis, | Apud Petrvm Lamy, in magna aula Palatii, secunda | columna, sub Magno Cæsare. | [rule] | M. DC. LX. | Cvm Privilegio Regis.

4°: a⁴ e⁴ i⁴ o² A-Qq⁴ Rr²; 172 ℓ .; [28], 1-310, [6] p., diagrams in the text.

CONTENTS: [2 pgs], Title page, verso blank.; [11 pgs], Dedication to Cardinal Grimaldo.; [1 pg], Blank.; [3 pgs], “In Libros | De Meteoris Et Fossilibus.” (recommendations).; [1 pg], “In Eosdem.”; [4 pgs],



METEORIS ET FOSSILIBVS LIBRI DVO, 1660

"Præfatio.;" [5 pgs], "Svmmaria" (=table of contents).; [1 pg], Blank.; 1-310, Text.; [5 pgs], "Index | Rerum Præcipvarvm.;" [1 pg], "Privilege Dv Roy."

NOTE: Leaf i3 was missing from copy examined, and it is assumed to contain the last page of the "Præfatio" and first page of the "Svmmaria."

VERY RARE. This volume investigates meteorites and various aspects of mineralogy and palaeontology, including salt, coal, metals, and various gems. Although written for the general public, it is a valuable scientific contribution for its comparisons of mid-seventeenth century theories to the ancient explanations of minerals.

REFERENCES: Hoover Collection: no. 271. • NUC: 150, 673 [ND 0414036]. • Sinkankas, *Gemology Bibliography*, 1993: no. 1796. • Ward & Carozzi, *Geology Emerging*, 1984: no. 703.

1455. Collected works, 1681: Johann Baptistæ du Hamel | Operum | Philosophi- | corum | Tomus I. | In quo continentur tractatus hi sequentes: | I. Astronomia Physica. | II. De Meteoris & fossilibus libri duo. | III. De Consensu veteris & novæ Phi- | losophiæ | [ornament] | Norimbergæ, | Sumptibus Johannis Ziegeri, Bibliopolæ. | Literis Christophori Gerhardi. | [rule] | Anno M DC LXXXI.

2 vols. Title vignettes, frontispiece, illus. 4^o: [8], 799 p., engraved frontispiece.

RARE. The *Meteoris et Fossilibus* is reprinted in the first volume of these collected writings of Du Hamel. The contents of volume 2 comprise: IV. De Corporum Affectionibus cum Manifestis, tum Occultis, Libri Duo. V. De Mente Humana Libri quatuor. VI. De Corpore Animato Libri quatuor.

REFERENCES: NUC: 150, 673 [ND 0414040]. • VD17: 1:064100Z.

DU MOLINET, Claude. (BORN: c1620; DIED: 1687) *French librarian.*

1456. — French, 1692 [Collection catalog].

Le | Cabinet De La | Bibliothèque | De | Sainte-Geneviève. | Divisé En Deux Parties. | Contenant les Antiquitez de la Réligion des Chrétiens, des Egyptiens, & | des Romains; des Tombeaux, des Poids & des Médailles; des Monnoyes, | des Pierres antiques gravées, & des Minéraux; des Talismans, des Lampes | antiques, des Animaux les plus rares et les plus singuliers, des Coquilles | les plus considérables, des Fruits étrangers, & quelques Plantes exquises. | Par le R.P. Claude Du Molinet, | Chanoine Règulier de la Congrégation de France. | [ornament] | A Paris, | Chez Antoine Dezallier, ruë Saint Jacques | à la Gouronne d'or. | [rule] | M. DC. XCII. | Avec Privilege Dv Roy.

2 parts in one volume. [Part 1] 2^o: π^2 6² A-Mmm²; 119 ℓ .; Engraved title page, [6], [1]-224, [8] p., frontispiece (portrait of du Molinet). [Part 2] 2^o: Engraved title page, 45 engraved plates by Franz Ertinger (5 double-page).

RARE. A beautifully produced catalog of the important collection brought together by Father Claude du Molinet as an annex to the library of the abbey of Sainte-Geneviève in Paris. In his preface, Du Molinet writes that his guiding principle in building the collection of rare and curious objects was the should 'be utilized in science, mathematics, astronomy, optics, surveying, natural history.' The collection was boosted by the acquisition of the greater portion of Fabri de Peiresc's [see note below] collection which consequently propelled du Molinet's effort into the first ranks of French collections.

Du Molinet divided the collection into two main sections, Antiquities and Natural History. The first is divided into those objects relating to (a) Christian religion, (b) the religion of the Egyptians and Romans, (c) the rites of burial, (d) Roman weights and measures. Coins, medals, engraved gems, talismans, and lamps then followed. The Natural History was divided into birds, animals, fish, fruits, plants, shells, stones and minerals.

The physical arrangement of the collection is carefully recounted in this catalog. Facing the entrance was a display of clothes and weapons from Persia, India and America, above which were three tiers of urns, lamps, nautical instruments, and other antiquities. Flanking this were two cabinets with specimens of petrifications, Indian birds, animals and footwear from various locations. Above were objects from China, various corals and other marine growths. The other sides of the room contained walnut cabinets containing the medal collection, which included Greek, Roman, Hebrew silver coins, papal medals, talismans and coins from far east countries. Other cabinets housed scientific instruments, precious and semi-

precious stones, minerals, shells, stuffed animals and preserved fish. Bear spaces on the walls were hung with paintings, including a series of twenty-two pastel portraits of the Kings of France. The excellent plates of Ertinger, illustrate the room that housed the collection and also two large views of the library's interior, with a view of the Paris skyline visible through an open window.

Fabri de Peiresc. (BORN: 1580; DIED: Aix, France, 1637) *French scholar & naturalist*. Peiresc was a profound antiquarian who devoted his lifetime to scholarly pursuits, travel, and correspondence with other scholars. He accumulated a library and collection of antiquities and natural curiosities from all parts of the world. But it is recorded that as quickly as many objects came into his possession he would gift them to other deserving scholars. For example, Athanasius Kircher records that many Egyptian items came into the Museum Kircherianum through Peiresc's generosity.

REFERENCES: BL: [459.e.22.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 271. • *Histoire des bibliothèques françaises*. Edited by Claude Jolly. [Paris.] Promodis-Ed. du Cercle de la Librairie, 1988-. 4 vols. [History of French libraries.]: 1, pp. 22-23, 342-344 & p. 360. • Murray, *Museums*, 1904: 1, 218 & 3, 80. • Schnapper, *Collections et Collectionneurs*, 1988-94: 1, 282 ff. • Sinkankas, *Gemology Bibliography*, 1993: no. 1803 [not seen]. • *Wunderkammer to Museum*: no. 7. (Peiresc) ABF: I 815, 420-438. • *Biographie Universelle*. • Dezobry, *Dictionnaire de Biographie*, 1889. • Feller, *Biographie Universelle*, 1851. • Gassendi, P., *Illustris Nicolai Claudii Fabricii de Peirese Vita*. Paris, 1641. [Vivid biography of Peiresc]. • Le Moyne, Nicolas Tous-saint., *Les siècles littéraires de la France*. Paris, 1800-3. 4 vols. [Reprinted, Genève, Slatkine, 1971.]. • *Nouvelle Biographie Générale* (Hoefler). • WBI.

DUBLIN, Ireland. Trinity College.

A Descriptive catalogue of the simple minerals in the systematic collection of Trinity College, Dublin. (Dublin, 1850).

See: Apjohn, James.

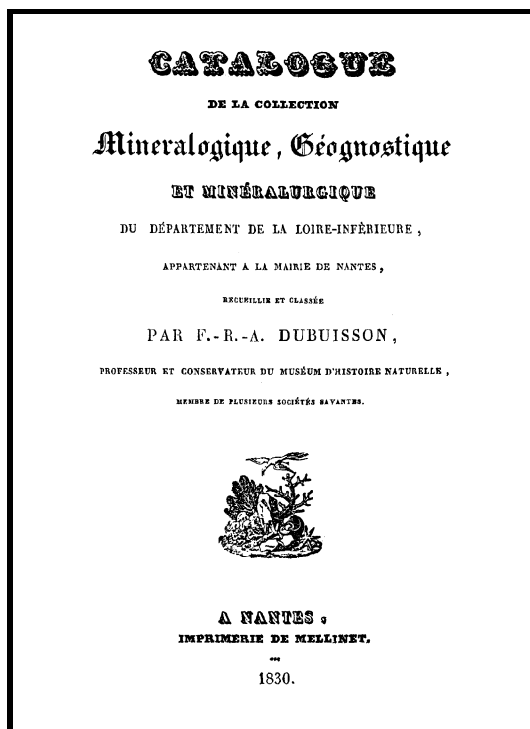
DUBUISSON, François René André. (BORN: Nantes, France, 13 August 1763; DIED: Nantes, France, 11 January 1836) *French apothecary*.

Born the son of a goldsmith, Dubuisson was apprenticed as an apothecary, eventually opening a shop on rue Quées in 1788 in his native Nantes. He had an interest in the natural sciences and collected specimens of all the minerals, plants and animals he encountered. Eventually, he gave these important collections to the city of Nantes. There they constituted a museum of natural history, which opened to the public on 15 August 1810. On the occasion, Dubuisson gave a commemorative speech. He was one of the founders of the Société Académique de Nantes (Academic Society of Nantes).

REFERENCES: ABF: I 337, 122-129. • *Annales de la Société académique de Nantes*: 7, 197. • DBF: 11, cols. 1109-10 [by St. Le Tourneur]. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, col. 608. • WBI.

1457. — French, 1830 [Collecton catalog].

Catalogue | De La Collection | Minéralogique, Géognostique | Et Minéralurgique | Du Département De La Loire-Inférieure, | Appartenant A La Mairie De Nantes, | Recueilli Et Classée | Par F.-R.-A. Dubuisson, | Professeur Et Conservateur Du Muséum D'Histoire Naturelle, | Membre De Plusieurs Sociétés Savantes. |



CATALOGUE DE LA COLLECTION, 1830

[ornament] | A Nantes, | Imprimerie De Mellinet. | [rule] | 1830.

8°: π⁸ 2-208; 168ℓ.; [1]-301, [19] p. Contained within a pocket on the back cover, one folding map, "Carte | Geognostique | Du | Département | De La | Loire=Inférieure. | ... | 1832." Page 37 misnumbered 73. PAGE SIZE: 196 x 125 mm.

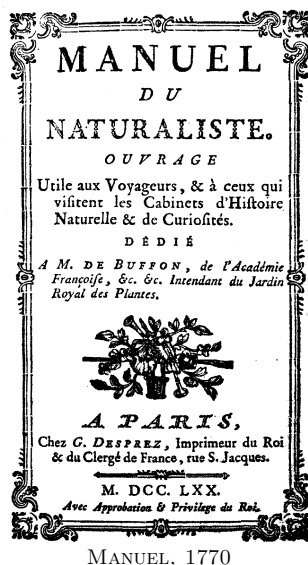
CONTENTS: [1-2], Half title page, "Catalogue | De La Collection | Minéralogie, Géognostique | Et Minéralurgique | Du Département De La Loire-Inférieure," verso blank.; [3-4], Title page, verso blank.; [5]-48, "Introduction."; [49]-301, "Catalogue | De La Collection | Mineralogie, Géognostique | Et Minéralurgique | ..."; [1 pg], Blank.; [8 pgs], "Table | Des | Noms Des Communes."; [8 pgs], "Table | Des | Noms Des Matières."; [1 pg], "Errata."; [1 pg], Blank.

VERY SCARCE. Describes the mineralogical, paleontological and geological samples found in the region of the Loire-Inférieure in northwest France. The specimens described were almost all collected by Dubuisson on one of his many excursions within France. In the introduction he describes the terrain encountered and the best collecting areas. This is followed by a descriptive catalog of the specimens, including quartz, calcite, silver minerals, pyromorphite, mimetite, etc. At the end is an index of the various mineral synonyms and at table of contents. A large folding map, accompanying but not bound into the text, provides an overview of the region and the various locales from which specimens originated. The specimens described subsequently became part of the collections of the Muséum de Nantes

DUFRÉNOY

(Natural History Museum of Nantes). This museum had been founded in 1799, when Dubuisson had donated his important natural history collections to the city of Nantes.

REFERENCES: Petersen, *World Directory of Mineral Collections*, 1994: 92-3.



MANUEL, 1770

DUCHESNE, Henri-Gabriel.

1458. — French, 1770 [First edition].

[Contained within an ornate box:] Manuel | Du | Naturaliste. | Ouvrage | Utile aux Voyageurs, & à ceux qui | visitent les Cabinets d'Histoire | Naturelle & de Curiosités. | Dédie | A M. de Buffon, de l'Académie | Française, &c. &c. Intendant du Jardin | Royal des Plantes. | [ornament] | A Paris, | Chez G. Desprez, Imprimeur du Roi | & du Clergé de France, rue S. Jacques. | [ornate rule] | M. DCC. LXX. | Avec Approbation & Privilège du Roi.

12°: [I]-XII, [1]-598, [2] p. PAGE SIZE: 167 CE 108 mm.

SCARCE. Premier edition with the text dedicated to Buffon, the celebrated anthropologist and friend of Voltaire, whose monumental *Natural History*, published in 1746 in 36 volumes. In France, in the later eighteenth century, it was a popular pastime to collect objects of natural history. Duchesne's *Manual* helped guide the collector in his hobby. It is printed in two columns and contains the Latin and geographical names of all manner of natural history objects, including minerals.

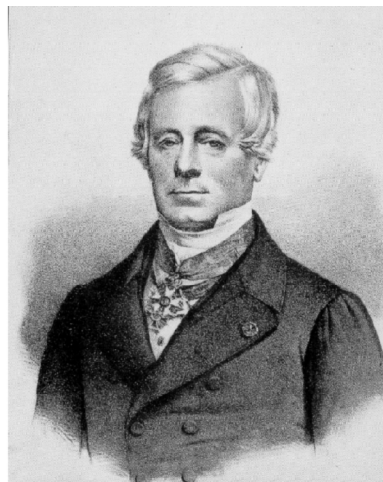
Another edition, 1797: *Manuel du Naturaliste ouvrage utile aux Voyageurs et à ceux qui visitent les Cabinets d'Histoire Naturelle et de Curiosités*. Paris, Remont, 1797. 4 vols. 8°: 512 p., 426 p., 487 p., 368 p., 8 plates.

Scarce. Co-authored with P.-J. Macquer [see note below] this French natural history encyclopaedia was intended for voyagers and museum visitors. In the later

part of the eighteenth century the "Cabinet of Curiosity" or small privately owned museum was flourishing in England and throughout Europe. During this time an interest in natural history was fashionable and this type of reference work would have been essential for the library of the well-educated European. The text is a good indicator of the level of understanding and knowledge of natural history at that time.

Pierre Joseph Macquer. (BORN: Paris, France, 9 October 1718; DIED: Paris, France, 15 February 1784) *French physician & chemist.* Macquer was professor of chemistry at the Jardin du Roi in Paris, as well as the overseer at the royal porcelain manufacturing plants in Sèvres. Macquer wrote several highly regarded textbooks in chemistry and physics. He was elected a member of the Academie des Sciences in Paris in 1845.

REFERENCES: *Cabinets de Curiosités*: no. 123. • Mengel, *Catalogue of the Ellis Collection*, 1972-83: no. ?? (Macquer) *Mémoires de l'Académie Royale des Sciences*: 1784. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 2, cols. 7-8.



DUFRÉNOY

DUFRÉNOY, Ours Pierre Armand Petit. (BORN: Sevran, France, 5 September 1742; DIED: Paris, France, 20 March 1857) *French mineralogist & geologist.*

Dufrénoy studied at the École Polytechnique and École des Mines in Paris. He was named engineer of mines in 1818, and assumed the rôle as head of the collections of the École des Mines. At that same institution, he was appointed an assistant professor of mineralogy in 1827, becoming a full professor in 1835. In 1846, he was named director of the school, and in that capacity he was responsible for modernizing the curriculum. In 1822, under the supervision of BROCHANT DE VILLIERS, DUFRÉNOY and BEAUMONT were selected by the government to carry out the necessary field work to prepare the first modern geological map of France. This research occupied Dufrénoy until 1841 when the map was published. After Brongniart's death in 1847, he was appointed professor of mineralogy at the Muséum d'Histoire Naturelle. He was made a member of the Academie des Sciences in 1840 and in 1843 the Geological Society of London presented Dufrénoy and Élie de Beaumont the Wollaston Medal for their geological map.

REFERENCES: ABF: I 344, 211-216; 1058, 344-345. • Barr, *Index to Biographical Fragments*, 1973: 73. • DSB: 4, 217-8 [by J.G. Burke]. • Lambrecht & Quenstedt, *Catalogus*, 1938: 121. • *Nouvelle Biographie Générale* (Hoefer): 15, cols. 71-3. • Poggendorff: 1, cols. 614-5. •

Sarjeant, *Geologists*, 1980: 2, 928 & Suppl. 1 (1986), 1, 394.
 • WBI. • *World Who's Who in Science*: 489.

1459. — French, 1827 [First edition].

Voyage | Métallurgique | En Angleterre, |
 Ou, | Recueil De Mémoires | Sur Le Gisement,
 L'Exploitation Et Le Traitement | Des Minerais
 D'Étain, De Cuivre, De Plomb, De | Zinc Et De
 Fer, | Dans La Grande-Bretagne; | Par MM.
 Dufrénoy et Élie De Beaumont, | Ingénieurs Des
 Mines. | [ornament] | Paris, | Bachelier, Successeur
 De M^{me}. V^e. Courcier, | Libraire Pour Les Sciences,
 | Quai Des Grands-Augustins, n^o. 55. | [rule] 1827.

8^o: [i]-xii, [1]-572 p., 16 folding plates (2 hand-colored), one hand-colored folding map.

CONTENTS: [i-ii], Half title page, "Voyage | Métallurgique | En | Angleterre," verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, "Avertissement.;" [ix]-xii, "Note | Sur Les Poids, Mesures Et Monnaies.;" [1]-549, Text.; [550], Blank.; [551]-572, "Table Des Matières."

VERY SCARCE. Co-authored with Léonce Élie de Beaumont [1798-1874]. This is the first separate appearance of a publication that appeared as a series of articles in the *Annales des Mines* from 1824-27. "In the year 1820 a copy of Greenough's map of England and Wales having been sent to the École des Mines at Paris, the desire arose to provide France with a similar compendium of its geology. Accordingly, two engineers of the Mines Department, Beaumont and Dufrénoy, were, in 1822, sent to England where they spent six months studying the principles on which the English map had been constructed, and other subjects connected with the project." (Geikie) Its publication exerted a powerful influence on the development of geology in France.

REFERENCES: Geikie, *Founders of Geology*, 1905. • NUC. • NYPL Catalog. • Zittel, *History of Geology*, 1901: pp. 150, 299, 501 & 517.

1460. 2nd edition, 1837-9: Voyage | Métallurgique | En Angleterre, | Ou | Recueil De Mémoires | Sur Le Gisement, L'Exploitation Et Le Traitement Des Minerais | De Fer, Étain, Plomb, Cuivre Zinc, | Et Sur La Fabrication De L'Acier, | Dans La Grande-Bretagne; | Par | MM. Dufrénoy, Élie De Beaumont, | Coste et Perdonnet, | Anciens Élèves de l'École Polytechnique, Ingénieurs des Mines. | Seconde Édition, | Corrigée Et Considérablement Augmentée. | [ornate rule] | Tome Premier. | [ornate rule] | Paris, | Bachelier, Imprimeur-Libraire, | Quai Des Augustins, N^o 55. | [ornate rule] | 1837.

2 vols. and atlas. [VOL 1 1837] 8^o: [4], i-vi (i.e., iv), [1]-607, [1] p. [VOL 2: 1839] 8^o: [i]-viii, [1]-735, [1] p. [Atlas] Published in 1839.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Voyage | Métallurgique | En Angleterre," verso printer's information.; [2 pgs], Title page, verso blank.; [i]-vi (i.e., iv), "Préface.;" [1]-585, Text.; [586], Blank.; [587]-607, "Table Des Matières | Contenus | Dans Le Premier Volume.;" [1 pg], "Errata."

[Vol 2] [i-ii], Half title page, "Voyage | Métallurgique | En Angleterre," verso printer's information.; [iii-iv], Title page, verso blank.; [v]-viii, "Note | Sur Les Poids, Mesures Et Monnaies.;" [1]-711, Text.; [712], Blank.; [713]-735, "Table Des Matières | Contenus | Dans Le Second Volume.;" [1 pg], "Errata."

RARE. Second edition, revised and enlarged. A separate and very rare atlas of plates was published in 1839.

REFERENCES: NUC. • NYPL Catalog. • Zittel, *History of Geology*, 1901: pp. 150, 299, 501 & 517.

1461. — French, c1830.

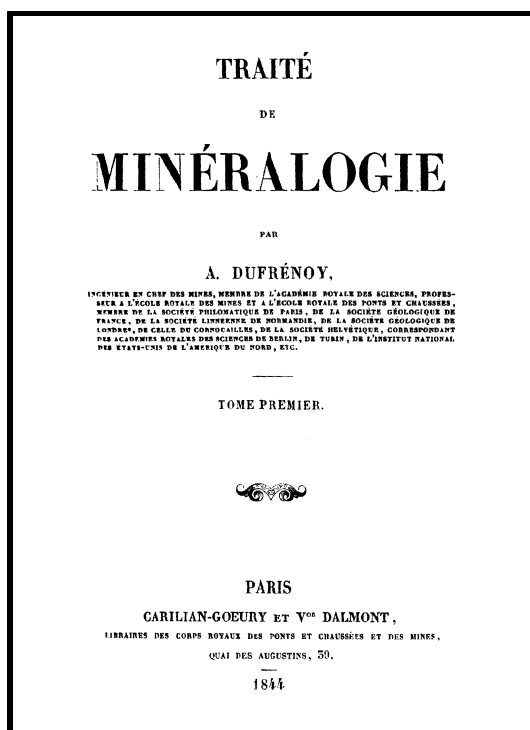
Cours de Minéralogie, | Rédigé d'après les Notes
 priss aux Lecons | de M. Dufrénoy, 1829—1830.

2^o: [1]-189 p.

CONTENTS: [1]-189, Text.

VERY RARE. Published in Paris about 1830, this *Course of Mineralogy* contains Dufrénoy's lecture notes used during his mineralogy presentation in 1829 and 1830 at the École des Mines (School of Mines) in Paris. It is lithographed from a beautifully prepared manuscript, and it is written in a clear style, allowing for self study of the subject. There is no title page to the work, rather the heading is found at the top of the first page.

REFERENCES: NYPL Catalog.



TRAITÉ DE MINÉRALOGIE, 1844

1462. — French, 1844-7 [First edition].

Traité | De | Minéralogie | Par | A. Dufrénoy, |
 [...7 lines of titles and memberships...] | [rule] | Tome
 Premier. | [ornament] | Paris | Carilian-Goeury et
 Vor Dalmont, | Libraires Des Corps Royaux Des
 Ponts Et Chaussées Et Des Mines, | Quai Des
 Augustins, 39. | [rule] | 1844 [-1847].

3 vols. and atlas. [VOL 1: 1844] 8^o: π^2 1-41⁸ 427; ?? ℓ .; [4], [i]-viii, [1]-669, [1] p., folding plate.; [VOL 2: 1845] 8^o: π^2 1-43⁸; ?? ℓ .; [4], [1]-685, [3] p.; [VOL 3:

DULAC

1847] 8°: π^2 1-518 524; ?? ℓ .; [4], [1]-823, [1] p.; [Atlas: 1847] 8°: π^2 a⁸ 1-168 174; ?? ℓ .; [4], [i]-xvi p., 224 plates on 112 leaves, 225-263, [1] p. PAGE SIZE: 212 x 132 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, verso "Imprimerie De Hennuyer Et Turpin, ..."; [2 pgs], Title page, verso blank.; [I]-VIII, "Préface."; [1]-664, Text.; [665]-669, "Table Des Matières | Contenus | Dans Le Premier Volume."; [1 pg], Blank.

[Vol 2] [2 pgs], Half title page, verso "Imprimerie De Hennuyer Et Turpin, ..."; [2 pgs], Title page, verso blank.; [1]-676, Text.; [677]-[678], "Errata Du Premier Volume."; [679]-685, "Table Des Matières | Contenus | Dans Le Deuxième Volume."; [1 pg], Blank.; [2 pgs], Advertisement.

[Vol 3] [2 pgs], Half title page, verso "Imprimerie De Hennuyer Et Ce, ..."; [2 pgs], Title page, verso blank.; [1]-733, Text.; [734]-746, "Supplément."; [747]-790, "Appendice."; [791]-792, "Errata Du Deuxième Volume."; [793]-796, "Table Des Matières | Contenus | Dans Le Troisième Volume."; [797]-823, "Table Générale Des Matières."; [1 pg], Blank.

[Atlas] [2 pgs], Half title page, verso "Imprimerie De Hennuyer Et Turpin, ..."; [2 pgs], Title page, verso blank.; [I]-XVI, "Notation | Adoptée | Pour Représenter Les Faces Des Cristaux | Et | Méthode Pour Les Construire."; Plates 1-224 (mostly crystal drawings); [223]-232, "Table Des Plances | Contenus Dans L'Atlas."; [233]-236, "Errata Du Troisième Volume."; [237]-263, Table Générale Des Matières.; [1 pg], Blank.

SCARCE. This is an important mineralogical and crystallographic work in the history of those sciences. Häüy, gone for over twenty years when these volumes appeared, no longer dominated the French school. Chemistry and crystallography had made major discoveries, making it possible to advance to a more successful theoretical stage in mineral classification. New original research was being carried on, as is evident by the amount of information contained in these volumes. Here the author describes the effects of high temperature on minerals and crystals and gives theories about the structure of crystals, together with the standard information about the physical characters of minerals, chemical properties, crystal systems and systematic mineralogy, in which the author follows a natural method of classification.

Advances in the chemical composition of mineral species now allowed Dufrénoy to employ chemistry as a true means of classification. He uses this classification because he believes it brings together all observations made in the science under a single, unified explanation. However, he believed that using the bases to classify metals, gave birth to true natural groups in which there was one common element. For example, all those of lead, all those of copper, and all those of iron. On the other hand, silicates were their own distinct group because hardness, luster and other properties were similar. Dufrénoy believed then, that classification by acids should be confined to the silicates.

In the first volume of the text are seven folding engraved plates, four of which are detailed renderings of mineralogical instruments: goniometers (Häüy, Wollaston, Mitscherlich, Adelman and Babinet), Soleil refractometer and a Soleil polariscope. The atlas volume contains over 200 engraved plates showing

more than 1,200 crystal diagrams with references to Naumann's crystal notation.

REFERENCES: Dana's 7th (Bibliography): 70. • *Freilich Sale Catalog*: no. 162. • Sarjeant, *Geologists*, 1980: 2, 828. • Ward & Carozzi, *Geology Emerging*, 1984: no. 699.

1463. 2nd edition, 1856-9: *Traité | De | Minéralogie | Par | A. Dufrénoy, | [3 lines of titles and memberships] | [wavy rule] | Deuxième Édition, | Revue, Corrigée. | Et Considérablement Augmentée. | [wavy rule] | Tome Premier. | [wavy rule] | Paris | Victor Dalmont, Éditeur, | Successeur de Carilian-Gœury et Vor Dalmont, | Libraire Des Corps Impériaux Des Ponts Et Chaussées Et Des Mines, | Qual des Augustins, 49. | [short rule] | 1856.*

5 vols. [Text] [VOL 1: 1855] 8°: [i]-xii, [1]-715, [1] p., text illus., 5 folding plates; [VOL 2: 1856] 8°: [4], [1]-683, [1] p.; [VOL 3: 1856] 8°: [4], [1]-719, [1] p.; [VOL 4: 1859] 8°: [4], [1]-770 p.; [VOL 5, Atlas: 1856] 8°: [4], i-iii p., plates 1-110, [liii]-lx p., plates 161-236. PAGE SIZE: 214 x 132 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, "Traité | De | Minéralogie," verso "Typographie Hennuyer, ..."; [iii-iv], Title page, verso blank.; [v]-xii, "Préface."; [1]-707, Text.; [708], Blank.; [709]-715, "Table Des Matières | Contenus | Dans Le Premier Tome."

[Vol 2] [2 pgs], Half title page, "Traité | De | Minéralogie," verso "Typographie Hennuyer, ..."; [2 pgs], Title page, verso blank.; [1]-674, Text.; [675]-683, "Table Des Matières | Contenus | Dans Le Deuxième Volume."; [1 pg], Blank.

[Vol 3] [2 pgs], Half title page, "Traité | De | Minéralogie," verso "Typographie Hennuyer, ..."; [2 pgs], Title page, verso blank.; [1]-710, Text.; [711]-719, "Table Des Matières | Contenus | Dans Le Troisième Volume."; [1 pg], Blank.

[Vol 4] [2 pgs], Half title page, "Traité | De | Minéralogie," verso "Typographie Hennuyer, ..."; [2 pgs], Title page, verso blank.; [1]-632, Text.; [633]-656, "Table | De La Distribution Des Espèces Mineraes."; [657]-670, "Extrait Du Tableau Minéralogie | De M. Adam."; [671]-689, "Supplément."; [690], Blank.; [691]-726, "Appendice."; [727]-767, "Table Des Matières | Contenus | Dans Le Quatrième Volume."; [768], Blank.; [769]-770, "Errata."

[Vol 5, Atlas] [2 pgs], Half title page, "Traité | De | Minéralogie. | [short rule] | Atlas," verso "Typographie Hennuyer, ..."; [2 pgs], Title page, verso blank.; [i]-xxxii, "Notation | Adoptée | Pour Représenter Les Faces Des Cristaux | Et | Méthode Pour Les Construire."; [xxxiii]-xlvi, "Exposé Sommaire | Du Système | Cristallographie De Mohs | Et De Sa Notation."; [xlix]-lii, "Nomenclature Cristallographique | Et Notation."; Plates 1-110.; [liii]-lx, "Table Des Figures | Contenus Dans L'Atlas."; Plates 161-236.

RARE. Second edition, greatly enlarged. The atlas contains a section on Mohs crystal notation and crystal notation in general. The plates of the atlas show crystal drawings, while the plates in volume one of the text show various mineralogical apparatus.

The enlarged second edition of this standard work on mineralogy. The first edition appeared in 1844-1847.

REFERENCES: Dana's 7th (Bibliography): 70.

Handbuch zum Bestimmen der Mineralien auf dichotomischem Wege nach Dufrénoy's *Traité de Minéralogie*. Mit einem Vorwort von Dr. Chr. Zimmermann ... Nebst 240 Abbildungen. (Clausthal, 1848).

See: **Zimmermann, Johann Christian.**

DULAC, Jean Louis Alléon.

See: **Alléon Dulac, Jean Louis.**

DUPARC, Louis-Claude. (BORN: 1866; DIED: 1932) *Swiss mineralogist & petrologist.*

Duparc was professor of mineralogy and petrology and director of the mineralogical and analytical chemistry laboratories at the University of Genève.

REFERENCES: ABF: II 235, 381. • Lorenz, *Catalogue Général*, 1869-1945. • RBA: Russian Biographical Archive: I 172, 257. • WBI.

1464. — French, 1907-13.

Traité | De | Technique Minéralogique | Et
Pétrographique | Par Le | Dr. Louis Duparc |
[...2 lines of titles and memberships...] | Et Le | Dr.
Francis Pearce | [...2 lines of titles and memberships...] |
Première Partie | Les Méthodes Optiques | Avec
516 Figures Dans Le Texte Et Une Planche |
[ornament] | Leipzig | Veit & Comp. Éditeurs |
1907.

[TITLE OF VOLUME TWO READS:]

Traité | ... | Et Le | Dr. Alfred Monnier | [...2
lines of titles and memberships...] | Deuxième Partie
| Tome I | Les Méthodes Chimiques | Qualitatives
| Avec 117 Figures Dans Le Texte | Et 1 Planche
En Couleur | [ornament] | Leipzig | Veit & Comp.
Éditeurs | 1913.

2 vols. illus. (incl. diags.) col. fold. plates.

VERY SCARCE. Francis Pearce, joint author (Part I) and Alfred Monnier, joint author (Part II). An authoritative textbook describing the techniques used in mineralogy and petrology, including especially optics and qualitative chemistry. Volume two of the second part was never published owing to WWI.

Contents : 1. ptie. Les méthodes optiques.—2. ptie. t. 1. Les méthodes chimiques qualitatives. Notes : 2. ptie.: par Louis Duparc et Alfred Monnier.

Mineralogy, Determinative. Petrology. Physical optics. Chemistry, Analytic.

1465. 3rd edition, 1914: Traité de chimie analytique qualitative suivi de tables systématiques pour l'analyse minérale, par L'Duparc et A. Monnier. 3e édition. Genève, Librairie scientifique Kündig, 1914.

8°: xii, 466 p.

VERY SCARCE. Co-authored with Alfred Monnier, professor extraordinary at the University of Genève. This treatise on qualitative analytical chemistry contains systematic tables showing the analysis of minerals.

EAKLE, Arthur Starr. (BORN: Washington, D.C., U.S.A., 27 July 1862; DIED: Honolulu, Hawaii, U.S.A., 5 July 1931) *American mineralogist*.

Eakle received his doctorate, magna cum laude, from the University of Munich in 1896. He came to Berkeley in 1900, becoming assistant professor in 1903, associate professor in 1913, full professor in 1919 and professor emeritus in 1929. Eakle contributed to mineralogical science by the discovery of new minerals. He was highly esteemed by the mineralogists of the world, and was a member of the Mineralogical Society of America and its president in 1925. He died while studying the minerals of Hawaii.

REFERENCES: ABA: I 479, 184-185. • Herringshaw's *National Library of American Biography*. • Internet search. • WBI. • *Who Was Who in America*.

1466. — English, 1904 [First edition].

Mineral Tables | For The Determination Of
Minerals By | Their Physical Properties. | By
| Arthur S. Eakle, Ph.D., | Assistant Professor
of Mineralogy, University of California. | First
Edition. | First Thousand. | New York: |
John Wiley & Sons. | London: Chapman & Hall,
Limited. | 1904.

8°: [i]-iii, [1], [1]-73, [1] p., index, tables
throughout. PAGE SIZE: 228 x 148 mm.

CONTENTS: [i-ii], Title page, verso copyright notice.; [iii], "Introduction."; [1 pg], Blank; [1]-7. "Mineral Tables."—description of physical properties.; [8], Blank; 9, "Analytical Key."; 10-69, Tables of the physical properties of minerals, first ordered by streak then the color of the mineral.; [70], Blank; 71-73, "Index."; [1 pg], Blank.

SCARCE. These *Tables* provide information on the prominent physical characters so that an unknown sample could be identified. They were made for practical determination, so for the most part, only the most common species are listed. To perfect the text, CHARLES PALACHE used the manuscript during his summer course of mineralogy, taught at the University of California in 1903. The book was popular and widely used in colleges and universities of The United States, being reissued many times to at least 1918 with no changes to the text.

REFERENCES: BL: [07107.k.21.]. • NUC: 154, 78-79.

EBEL, Johann Gottfried. (BORN: Zullichau, Prussia, Germany, 6 October 1764; DIED: 7 or 8 October 1830) *German physician*.

Ebel visited Switzerland for the first time 1790, and instantly fell in love with the land. He spent three years exploring the country, and collecting all information relating to it.

REFERENCES: Poggendorff: 1, col. 638.

1467. — German, 1793.

Anleitung auf die nützlichste und genussvollste art
die Schweiz zu bereisen ... Von J.G. Ebel ... Zürich,
Orell, Füssli und compagnie, 1793.

2 parts. [Part 1] 8°: [2], VIII, 174 p. [Part 2] 8°: 211, [1] p.

VERY SCARCE. The *Anleitung auf die nützlichste und genussvollste Art die Schweiz* gives a complete account of Switzerland, with the introductory material being followed by sections being followed by an alphabetically arranged list of places, with descriptions. It at once superseded all other works of the kind, and was the best Swiss guide-book for many years.

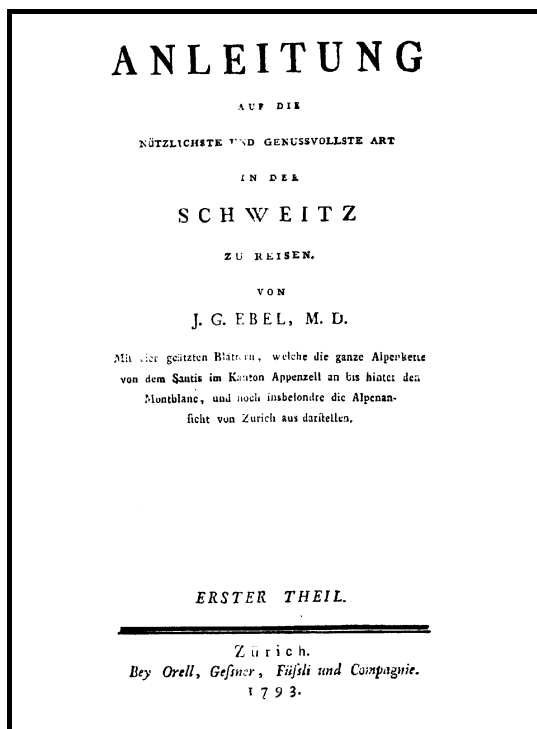
1468. 2nd edition, 1804-5: J.G.E. ... Anleitung ... auf die nützlichste und genussvollste Art die Schweiz zu bereisen. Zürich, 1804-5.

8°. VERY SCARCE.

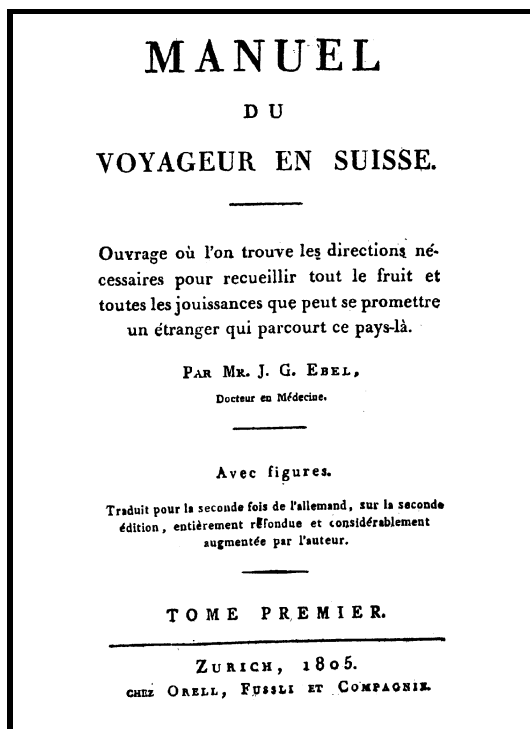
REFERENCES: LKG: XIV 507.

1469. 3rd edition, 1809-10: Anleitung auf die nützlichste und genussvollste art die Schweiz zu bereisen ... Von J.G. Ebel ... Dritte, umgearbeitete und vermehrte auflage ... Zürich, Orell, Füssli und compagnie, 1809-10.

4 parts. [Part I: 1809] 8°: xiv, 4, 325 p. [Part II: 1809] 8°: xvi, 572 p. [Part III: 1810] 8°: [4], 592 p. [Part IV: 1810] 8°: 678 p.



ANLEITUNG, 1793



MANUAL DU VOYAGEUR, 1805

VERY SCARCE. Volumes 2-4 have an added title page: "J.G. Ebel, M.D. vollständiger unterricht über alle naturschönheiten, geographische, physische, botanische und historische merkwürdigkeiten, so wie über die mineralogische und geognostische beschaffenheit des Alpengebirges der Schweiz und den angrenzenden theile von Savoyen, Piemont, der Lombardie, von Deutschland und Frankreich Als zweyter theil von der Anleitung, die Schweiz zu bereisen." Volumes 2-4 are alphabetically arranged.

Theil ii-iv are "Vollständiger unterricht über alle naturschönheiten, geographische, physische, botanische und historische merkwürdigkeiten, so wie über die mineralogische und geognostische beschaffenheit des alpengebirges der Schweiz."

REFERENCES: LKG: XIV 507.

1470. French transl., 1795: Instructions pour un voyageur qui se propose de parcourir la Suisse de la maniere la plus utile et la plus propre à lui procurer toutes les jouissances dont cette contrée abonde. Traduit de l'allemand du Dr. Ebel, par le traducteur du Socrate rustique, avec un grand nombre de corrections et d'additions importantes avec figures ... Basle, J.J. Tourneisen, MDCCXCV.

2 vols.

VERY SCARCE. Translation by Frey de Landres[?].

REFERENCES: LKG: XIV 508a.

1471. French transl., 1805: Manuel du Voyageur en Suisse. Ouvrage où l'on trouve les directions nécessaires pour recueillir tout le fruit et toutes les jouissances que peut se promettre un étranger qui parcourt ce pays-là. Par Mr. J.G. Ebel ... Traduit pour la seconde fois de l'allemand, sur la seconde édition, entièrement refondue et considérablement augmentée par l'auteur ... Zürich, Chez Crell, Füssli et compagnie, 1805.

1472. 2nd edition, 1810-1: Manual du voyageur en Suisse. Ouvrage où l'on trouve les directions nécessaires pour

recueillir tout le fruit et toutes les jouissances que peut se promettre un étranger qui parcourt ce pays-là. Par Mr. J.G. Ebel ... Traduit pour la seconde fois de l'allemand, sur la seconde édition, enrichie de toutes les additions et corrections de la 3. édition originale ... Zürich, Chez Crell, Füssli et Compagnie, 1810-1.

4 vols. fronts. (part fold.), folding plates, folding colored map.

VERY SCARCE. Translation by Jean Gaudin [1766-1833].

REFERENCES: LKG: XIV 508a.

1473. 1837: Manuel du voyageur en Suisse. Ouvrage où l'on trouve les directions nécessaires pour recueillir tout le fruit et toutes les jouissances que peut se promettre un étranger qui parcourt ce pays-là. Par mr. J. G. Ebel ... Traduit de l'allemand. Paris, Maisson, 1837.

8°: xlvii, 564 p., one plate. VERY SCARCE.

REFERENCES: BL. • NUC.

1474. — German, 1808.

Ueber den Bau der Erde in dem Alpen-Gebirge zwischen 12 Längen- und 2-4 Breitengraden nebst einigen Beobachtungen über die Gebirge und den Bau der Erde überhaupt, mit geognostischen Karten, von Johann Gottfried Ebel ... Zürich, bei Orell Füssli & Compagnie, 1808.

2 vols. in one. 8°: xl, 836 p., 6 folding hand colored maps.

VERY SCARCE. A classic work on alpine geology. "Ebel was the first to bring any comprehensive account of Alpine geology to a relatively successful fulfilment ... His descriptions of the Alps was characterized

by clearness with which he distinguished the leading members of the mountain system." (Zittel).

REFERENCES: LKG: XIII 239. • Zittel, *History of Geology*, 1901: p. 91-3.

1475. — German, 1810.

Ideen über die Organisation und das eigenthümliche Leben des Erdkörpers und über die gewaltsamen Veränderungen seiner Oberfläche als eigener, mit erläuternden Anmerkungen vermehrten Auszug seines grösseren Werkes, über den Bau der Erde in den Alpengebirgen von Johann Gottfried Ebel. Wien, 1810.

8°: VERY SCARCE.

REFERENCES: BL. • LKG: XIII 240a. • NUC: [no copy listed].

EBELING, Max.

1476. — German, 1910.

Lehrbuch der Chemie und Mineralogie für höhere Lehranstalten von Prof. Dr. Max Ebeling. Berlin, Weidmannsche Buchhandlung, 1910.

2 parts. [Part 1: 1910] 8°: 378 p., 4 portraits, 386 illus. (Unorganische Chemie) VERY SCARCE.

ECKHOF, Hermann.

1477. — Latin, 1732 [Sale catalog].

Museum Eckhofianum, seu Catalogus Rerum Curiosarum & Memorabilium, ab Hermann Eckhof Collectarum, Auctionis ritu 1732 Lubecæ vendendarum. Lubecæ, 1732.

8°: 64 p.

VERY RARE. Auction sale catalog of Eckhof's collection of curiosities and memorabilia, auctioned in 1732. It is considered to have contained minerals.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: I, 261.

ECKSTORM, Heinrich.

1478. — Latin, 1620.

Historiae Terraemotuum complurium, & praecipue eius, quo Plura oppidum in Alpibus Reticis nuper misere obrutum & convulsum est. Quibus eorum caufae, species, effectus ... explicantur: Inspersa Methodica de Terraemotibus dissertatione, Cum appendice Locorum quorundam semper ardentium, ut & Specuum mirabilium; Additus est rerum et vocabulorum Index ... Ex sacrarum literarum monumentis ... excerptae, studio & opera M. Henrici Eckstormii ... Helmaestadii, Lucius, 1620.

8°. [16], 234, [30] p., illus. VERY SCARCE.

REFERENCES: LKG: XIII 257. • NUC: [no copy listed]. • VD17: 3:008404U.

EDINBURGH GEOLOGICAL SOCIETY.

1479. — English, 1887 [Bibliography].

Catalogue | Of The | Library | Of The | Edinburgh Geological | Society. | [ornament] | Edinburgh: | Printed For The Society By | Robert Symon, 8 St. James Square, | 1887.

8°: [1]-31, [1] p. RARE.

CONTENTS: [1-2], [Half title page, verso blank.— missing from copy examined.]; [3-4], Title page, verso blank.; [5-6], "Library Catalogue | Of The | Edinburgh Geological Society," verso blank.; [7]-8, "Excerpts from the Laws and By-Laws."; [9]-31, "Library Catalogue."; [1 pg], Blank.

REFERENCES: NUC. • USGS Library Catalog.

EDLER VON WIDMANNSTÄTTEN, A.J.B.

See: Widmannstätten, Aloys Joseph Beck Edler Von.

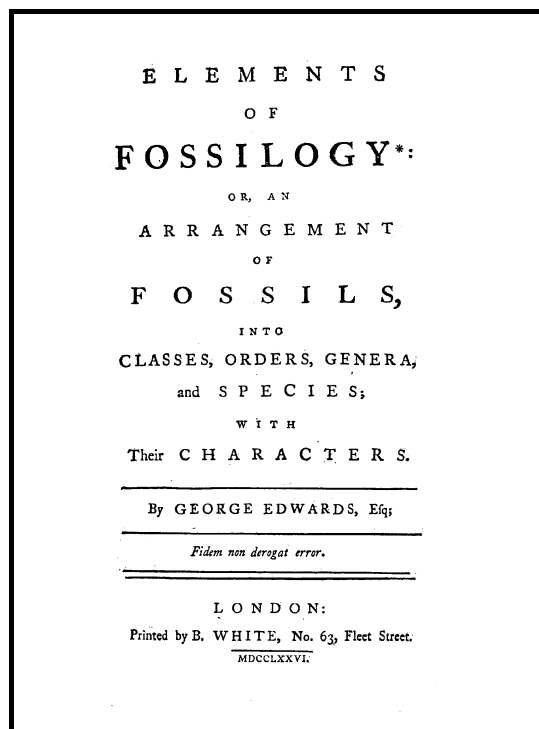


EDWARDS

EDWARDS, George. (BORN: Stratford, near Westham, Essex, England, 3 April 1694; DIED: Westham, Essex, England, 23 April 1773) *English naturalist.*

As a youth, Edwards had access to a large library, which developed his habit of incessant reading. He traveled throughout northern Europe, and in 1718 while going through Norway he was imprisoned by Danish soldiers who suspected him of spying. After his release, the travels were continued through France. He returned to England in 1720, where he began producing colored drawings of animals that fetched good prices and brought him contact with influential men of the period. One of them, Sir Hans Sloane, recommended Edwards as librarian of the Royal College of Physicians in 1733. His great work was an illustrated *History of Birds* (4 vols., London, 1743-51), for which the Royal Society awarded him a gold medal and elected him a fellow.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 363, 424-452; II 1456, 42-43. • *Biographie Universelle*: 12, 277 [by G. Cuvier]. • *Catalogue of Portraits of Naturalists*: 393 [3 portraits listed]. • DNB: 6, 535-6. • Poggendorff: 1, col. 644. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



ELEMENTS OF FOSSIOLOGY, 1776

1480. — English, 1776.

Elements | Of | Fossiology*: | or, an | Arrangement
 | of | Fossils, | into | Classes, Order, Genera,
 | and Species; | with | Their Characters. |
 [rule] | By George Edwards, Esq; | [rule] | Fidem
 non derogat error. | [double rule] | London: |
 Printed by B. White, No. 63, Fleet Street. | [rule] |
 MDCCLXXVI.

8°: π^4 B-Q⁴; 64 ℓ .; [8], [1]-120 p. PAGE SIZE: 220 x 130 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Advertisement."; [1 pg], "Errata."; [1 pg], "To the Reader."; [1 pg], Blank.; [2 pgs], "Index."; [1]-120, Text.

VERY SCARCE. This monograph was published from notes found in the author's effects after his death. It describes slightly over one hundred minerals in a system claimed to be new, but which is only a modification of LINNEAUS' classification plan. In "To the Reader," Edwards recognizes this treatise to be imperfect, however he wrote it with the intention of publishing another edition, "enriched with a great number, and a more minute account of individual fossils ..." The term *fossiology* used in the title of this work is defined by Edwards as "the knowledge of the different bodies, which are found in the earth, and which have neither animal or vegetable origin."

The text begins with a short introduction. This is followed by the descriptive mineralogy, which is divided into the six classes: (1) earths, (2) stones,

(3) inflammables, (4) metals, (5) cryptometalline fossils (=nonmetallic looking minerals that contain metals) and (6) salts.

REFERENCES: BL: [B.548.(2.)]. • CBN: 46, cols. 867-8. • NUC: 156, 129-30 [NE 0045324]. • Roller & Goodman, *Catalogue*, 1976: 1, 352.



EGEDE

EGEDE, Hans Poulsen. (BORN: 31 January 1686; DIED: 5 November 1758) *Norwegian theologian.*

Egede, a Lutheran missionary, went to Greenland in 1721 and, with the support of the Danish government, founded a mission for the Eskimo. He also helped to initiate trade between Denmark and Greenland. He returned to Copenhagen in 1736 to become principal of a seminary that trained missionaries for Greenland. His son, Povel Hansen also a missionary to Greenland, completed a translation of the New Testament for use by the Eskimo.

REFERENCES: *Dansk Biografisk Haandleksikon*. • *Dansk Biografisk Lexikon*. • Internet search. • Poggendorff: 1, col. 644.

1481. — Danish, 1729.

Det gamle Grønlands nye perlustration eller, En kort beskrivelse om de gamle mordske coloniers begyndelse og undergang i Grønland ... Kjøbenhavn, H.C. Paulli, 1729.

8°: 58 p.

RARE. A description of Greenland, including natural history. This edition was published without the author's permission.

REFERENCES: LKG: XIV 894.

1482. 2nd edition, 1741: Det gamle Grønlands nye perlustration, eller Naturelhistorie, og beskrivelse over det gamle Grønlands situation, luft, temperament og beskaffened ... Forfattet af Hans Egede ... Kjøbengavn, Trykt hos J.C. Groth, 1741.

8°: [12], 131, [3] p., plates, folding map. VERY SCARCE.

REFERENCES: LKG: XIV 894.

1483. German transl., 1730: Des alten Grönlands neue Perlustration, oder Eine kurtze Beschreibung derer alten Nordischen Colonien Anfang und Untergang in Grönland ... Aus der Dähnischen in die Deutsche Sprach übersetzt. Franckfurt: Stocks Erben und Schilung, 1730.

8°: 47 p.

VERY SCARCE. Translation of the much smaller first edition of *Det gamle Grønlands* (1729).

REFERENCES: LKG: XIV 894.

1484. Dutch transl., 1746: Beschryving van Oud-Groenland, of eigentlyk van de zoogenaamde Straat Davis: behelzende deszelfs natuurlyke historie, standsgelegenheid, gedaante, grenscheiden, veld-gewassen, dieren, vogelen, vischen, enz. Mitsgaders den ofrsprong en voortgang der aeloude Noorweegsche volkplantingen in dat gewest; benevens den aart, inborst, wooningen, levenswyze, lkeding, spraak, bygelovigheid, dichtkunst, uitspanningen en tydverdriyen der hedendaagsche inboorlingen. Eerst in de Deensche taal beschreven door Mr. Hans Egede ... Delft, R. Boitet, 1746. 8°: [24], 192 p., 11 plates, folding map. Title in red and black.

VERY SCARCE. LKG: XIV 894. First Dutch edition.

REFERENCES: LKG: XIV 894.

1485. French transl., 1763: Description et Histoire Naturelle du Groenland, par Mr. Egede ... Traduit en François par Mr. D.R.D.P. Copenhagen et Genève, C. & A. Philibert, 1763.

8°: [4], xxviii, 171 p., 11 plates, folding map.

VERY SCARCE. LKG: XIV 894. First French edition.

REFERENCES: LKG: XIV 894.

1486. English transl., 1745: A description of Greenland, showing the natural history, situation, boundaries, and face of the country ... By Mr. Hans Egede ... Translated from the Danish. London, C. Hitch, 1745.

8°: xvi, [4], 230 p., folding map.

VERY SCARCE. LKG: XIV 894. First English edition.

REFERENCES: LKG: XIV 894.

1487. English transl., 1818: A description of Greenland. By Hans Egede, who was a missionary in that country for twenty-five years. A new edition with an historical introduction and a life of the author ... London, T. & J. Allman, 1818.

8°: cxviii, 225 p., frontispiece (folding map), illustrations.

VERY SCARCE. LKG: XIV 894. Second English edition.

REFERENCES: LKG: XIV 894.

1488. German transl., 1742: Des alten Grönlandes neue perlustration, oder Naturell-Histoire und beschreibung der situation, beschaffenheit, luft und des temperaments dieses landes. Aus den dänischen ins teutsche übersetzt. Copenhagen, 1742.

4°: 144 p., one map.

VERY SCARCE. LKG: XIV 894. Second German edition.

REFERENCES: LKG: XIV 894.

1489. German transl., 1763: Herrn Hans Egede, missionäre und bischofes in Grönland, beschreibung und tatur-geschichte von Grönland, übersetzt von D. Johann Georg Krünitz ... Berlin, A. Mylius, 1763.

8°: xi, [1], 237 p., 11 plates (including folding map).

VERY SCARCE. LKG: XIV 894. Third German edition.

REFERENCES: LKG: XIV 894.

EGEDE, Povel Hansen. (BORN: 9 October 1708; DIED: 3 June 1789) *Norwegian theologian.*

Son of HANS POULSEN EGEDE, Povel Hansen continued on his father's missionary work in Greenland. He also became a professor of theology at the mission. He published a number of works, including dictionaries of the language spoken by the eskimos of Greenland.

REFERENCES: *Dansk Biografisk Haandleksikon*. • *Dansk Biografisk Lexikon*. • Internet search.

1490. — Danish, 1788.

Efterretninger om Grønland, uddragne af en Journal holden fra 1721 til 1788 af Paul Egede. Kiøbenhavn, Trykt af H.C. Schrøder, [1788].

8°: [12], 284 p., frontispiece, folding map.

VERY SCARCE. Contains a description of various travels throughout Greenland from 1721 to 1788 by one of the great missionaries. The frontispiece shows a portrait of the author.

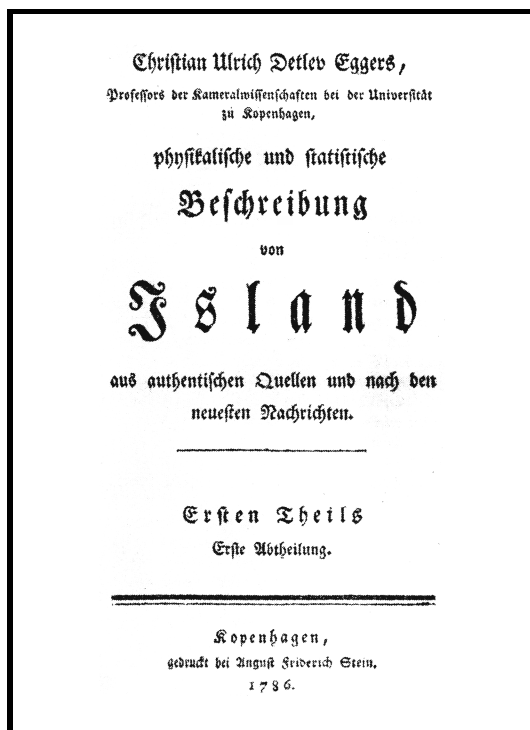
REFERENCES: LKG: XIV 912.

1491. German transl., 1790: Nachrichten von Grönland. Aus einem Tagebuche, geführt von 1721 bis 1788 vom Bischof Paul Egede. Aus dem dänischen Sprache ... Kopenhagen, Bey Christian Gottlob Proft, 1790.

8°: xii, [2], 16-333, [3] p., frontispiece, one folding map, 2 folding plates.

VERY SCARCE. Translation of *Efterretninger om Grønland* (1788).

REFERENCES: LKG: XIV 913a.



BESCHREIBUNG, 1786

EGGERS, Christian Ulrich Detlev, Freiherr von. (BORN: 1758; DIED: 1813) *Danish lawyer & economist.*

REFERENCES: ADB. • *Dansk Biografisk Haandleksikon*. • DBA: I 268, 347-378. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • SBA: Scandinavian Biographical Archive: A-68, 350-363. • WBI. • Worm, *Forsøg til et Lexicon over Danske*, 1771-84.

1492. — German, 1786.

Christian Ulrich Detlev Eggers, | [...2 lines of titles and memberships...] | physikalische und statistische | Beschreibung | von | Island | aus authentischen Quellen und nach den | neuesten Nachrichten. | [rule] | Ersten Theils | Erste Abtheilung. | [double rule] | Kopenhagen, | gedruckt bei August Friderich Stein | 1786.

8°: [4], 414 p.

EGLESTON

RARE. No more published. This was to be an ambitious description of the physical and political character of Iceland; however, only this first part was published. The introduction contains a bibliography of Iceland, while the remainder of the volume treats the physical geography of the island, including geological phenomena such as geysers, mineral springs, volcanoes, mineral deposits, etc.

REFERENCES: Fiske: I, 120. • LKG: XIV 43 & 44.



EGLESTON (c1914)

EGLESTON, Thomas. (BORN: New York City, New York, U.S.A., 9 December 1832; DIED: New York City, New York, U.S.A., 15 January 1900) *American mining expert & metallurgist.*

Egleston received his bachelareate and master degrees from Yale in 1854 and 1857, respectively. For post graduate work, he traveled to Paris and the École des Mines graduating in 1860. Upon returning to America in 1861, he was appointed superintendent of mineral and metallurgical products at the Smithsonian Institution. In 1864, Egleston left the Smithsonian to found the School of Mines at Columbia college where he remained a professor until 1897. In his honor the Egleston medal of the Columbia University School of Engineering was created.

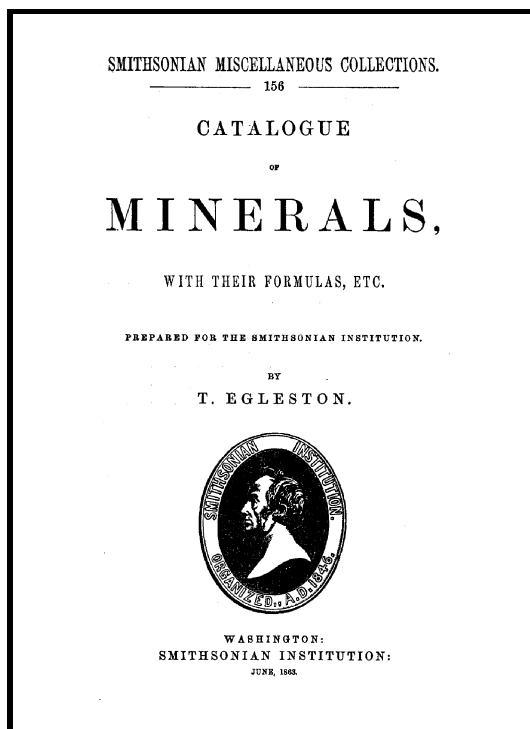
REFERENCES: ABA: I 492, 156-166. • Adams, *Dictionary of American Authors*, 1904: 116. • Barr, *Index to Biographical Fragments*, 1973: 77. • DAB: 3, pt. 2, 56. • Elliott, *Biographical Index*, 1990: 70. • *National Cyclopaedia of American Biography*: 3, 244. • Poggendorff: 4, 370. • Sarjeant, *Geologists*, 1980: 2, 948. • WBI. • *World Who's Who in Science*: 511.

1493. — English, 1863 [First edition].

Smithsonian Miscellaneous Collections. | — 156 — | Catalogue | of | Minerals, | With Their Formulas, Etc. | Prepared For The Smithsonian Institution. | By | T. Egleston. | [ornament] | Washington: | Smithsonian Institution: | June, 1863.

8°: π⁸ 2-3⁸ 4⁴; 28ℓ.; [i]-xiii, [1], [1]-42 p. PAGE SIZE: 250 x 152 mm.

CONTENTS: [i-ii], Title page, verso "Contents."; [iii], "Advertisement."; [iv], Blank.; v-vi, "Introduction."; vii-viii, "Chemical Symbols."; ix, "Systems Of Crystallization."; [x], Blank.; xi-xiii, "Analytical Table."; [1 pg],



CATALOGUE OF MINERALS, 1863

Blank.; [1]-31, "Catalogue Of Minerals."; [32], Blank.; [33]-38, "Check List Of Minerals."; [39]-42, "Alphabetical Index."

SCARCE. This catalog of mineral species with their formulas was prepared at the request of the Smithsonian Institution to facilitate the arrangement and labeling of the collection. It provides a compact outline of the science of mineralogy at the time.

REFERENCES: BL: [Ac.1875/2]. • NUC.

1494. 2nd edition, 1887: Catalogue | of | Minerals And Synonyms. | By | T. Egleston, Ph.D. | [ornate rule] | Washington: | Government Printing Office. | 1887.

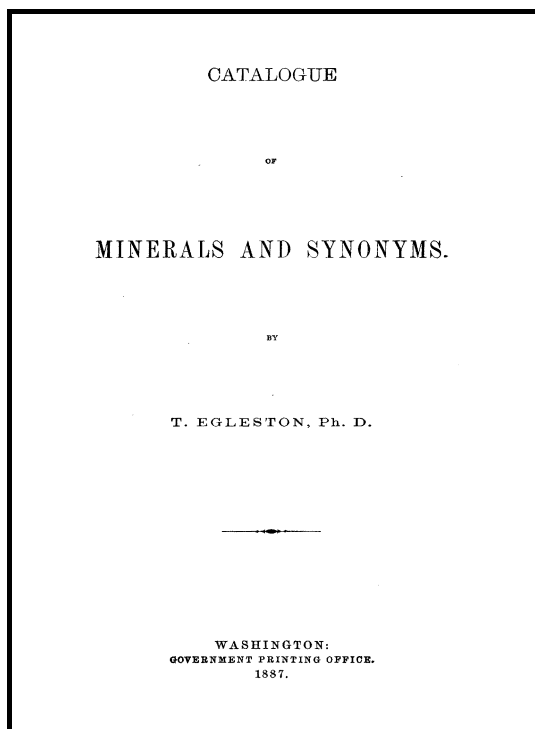
[SERIES TITLE PAGE READS:]

Department of the Interiors | U.S. National Museum. | — Serial Number 44 — | Bulletin | Of The | United States National Museum | No. 33. | [rule] | Published Under The Direction Of The Smithsonian Institution. | [ornate rule] | Washington: | Government Printing Office. | 1889.

8°: [1]-6, 6a-6d, 7-198 p. PAGE SIZE: 230 x 134 mm.

CONTENTS: [1]-2, Series title page, verso "Advertisement."—signed Spencer F. Baird, 7 January 1887.; [3-4], Title page, verso blank.; 5-6, "Preface."—signed Thos. Egleston, 1 December 1806.; 6a-6b, "List Of Abbreviations."; 6c-6d, "List Of Errata."; 7-190, "Catalogue Of Minerals."; 191-198, "Supplement."

SCARCE. This work was published as the forty-fourth in a series of papers intended to illustrate the collections of natural history and ethnology belonging to the United States, and constituting the National Museum (now the Smithsonian Institution). This catalog was begun in 1867 and used for the arrangement of the collections of the School of Mines of Columbia College; however, the work was not completed at that time. By the year 1886 and just prior to this edition, the science had added a considerable number of new species and discredited or corrected others; hence, it was a considerable undertaking to bring the text



CATALOGUE OF MINERALS, 1887

up-to-date.

REFERENCES: BL: [Ac.1875/13.]. • NUC.

1495. 3rd edition, 1892: A | Catalogue | of | Minerals and Synonyms. | By | T. Egleston, Ph.D. | Third Edition, Revised And Enlarged. | New York: | John Wiley & Sons, | 53 East Tenth Street. | 1892.

8°: [2], i-iii, [5], [1]-379, [1] p. PAGE SIZE: 246 x 150 mm.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1891, | By | Thos. Egleston."; i-iii, Preface, signed Thomas Egleston, 1 April 1892.; [1 pg], Blank.; [1 pg], "Preface To The Second Edition."—signed Thomas Egleston, 1 April 1891.; [1 pg], Blank.; [2 pgs], "List Of Abbreviations."; [1]-379, "Catalogue Of Minerals."; [1 pg], Blank.

SCARCE. Egleston undertook this revision after not finding a single work that contained a list of all known mineral names and synonyms. In the preface, is a list of 19 mineralogical authorities which he consulted in the compilation of this dictionary. Names have been added and changed in the text that the progress of the science dictated. As far as possible the names of rocks have been omitted, while the names of authenticated species are printed in bold. Doubtful species have been printed in ordinary type. In many instances the first description of the species or sometimes the best authority have been listed at the end of the description.

REFERENCES: BL: [7106.i.14.]. • Dana's 7th (Bibliography): 70. • NUC.

1496. — English, 1872.

Lectures | On | Mineralogy. | Delivered At The | School Of Mines, | Columbia College. | [rule] | Descriptive Mineralogy. | [rule] | By T. Egleston, | Professor of Mineralogy and Metallurgy, | School of Mines, Columbia College. | With 34 Lithographic

Plates. | New York: | D. Van Nostrand, Publisher, | 23 Murray and 27 Warren Street. | 1872.

8°: [2], [i]-xxvii, [3], 1-189, [1] p., 34 plates (crystal drawings), 4 p.

CONTENTS: [2 pgs], Title page, verso "Entered, according to Act of Congress, in the year 1871, ..."; [i], "Errata."; [ii], Blank.; [iii], "Preface."—signed T. Egleston, 1871.; [iv], Blank.; [v]-vii, "Contents."; viii-ix, "Classification Of The Species | According To | Crystalline Form."; x-xi, "Classification Of The Species | According To | Hardness."; xii-xiv, "Classification Of The Species | According To | Specific Gravity."; xv, "Systems Of Crystallization."; xvi-xxvii, "Comparision Of Notations."; [1 pg], Blank.; [1 pg], Sectional title page, "Descriptive | Mineralogy."; [1 pg], Blank.; 1-180, Text.; [181]-189, "Index."; [1 pg], Blank.; Plates 1-34.; [2 pgs], "Index To Plates."; [4 pgs], Advertisements.

SCARCE. This was the text Egleston prepared to accompany the minralogical lectures he presented at the Columbia School of Mines.

REFERENCES: BL: [no copy listed]. • NUC.

1497. — English, 1872 [2nd edition].

Diagrams | To Illustrate The | Lectures | On | Crystallography, | Delivered At The | School Of Mines | Of | Columbia College. | By | T. Egleston, | Professor of Mineralogy and Metallurgy. | Second Edition. | [ornament] | New York: | 1872.

8°: [i]-xliv p., 38 plates (plates 1-38 on 19 leaves showing crystal drawings, signed P. Bartow Del.).

CONTENTS: [i-ii], Title page, vers "Entered, according to Act of Congress, in the year 1872, ..."; [iii], "Introduction."—signed T. Egleston, 1872.; [iv], Blank.; v-xvii, Text.; [xviii]-xliv, Description of the plates.; [At end], 38 plates.

VERY SCARCE. "The following Diagrams are intended to illustrate the Lectures on Crystallography delivered at the School of Mines. They have been used with marked success since 1866. For this edition twenty-four of the plates have been entirely redrawn. They are give to the public in the hope that they may help to remove some of the difficulties which seem to surround the study of natural crystals."—*Introduction*.

REFERENCES: BL: [no copy listed]. • NUC.

1498. 1886: Lectures | On | Mineralogy. | Delivered At The | School Of Mines, | Columbia College. | [rule] | Descriptive Mineralogy. | With 84 Lithographic Plates. | [rule] | By | T. Egleston, Ph.D. | Professor of Mineralogy and Metallurgy. | New York | [short rule] | 1886.

8°: [i]-xxvii, [3], 1-192 p., 84 plates. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso "Entered, according to Act of Congress, in the year 1871..."; [iii], "Preface."—signed Th. Egleston, 1871.; [iv], Blank.; [v]-vii, "Contents."; viii-ix, "Classification Of The Species | According To | Crystalline Form."; x-xi, "Classification Of The Species | According To | Hardness."; xii-xiv, "Classification Of The Species | According To | Specific Gravity."; xv, "Scale Of Hardness."; xvi-xxvii, "Comparision Of Notations."; [1 pg], Blank.; [1 pg], Sectional title page, "Descriptive | Mineralogy."; [1 pg], Blank.; 1-183, Text.; [184], Blank.; 185-192, "Index."

REFERENCES: NUC. • NYPL Catalog.

EHRHART, Johann Balthasar. (BORN: 1700?; DIED: 1757?) *Swedish palaeontologist.*

Ehrhart was Physicus in Memmingen, and a member of the Leopoldian Academy.

EHRMANN

REFERENCES: Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 648.

1499. — Latin, 1724 [First edition].

Dissertatio de belemnitis Suevicis. Lugduni Bavorum, 1724.

4°: 21 p.

VERY SCARCE. In this important paper on fossils in Sweden, Ehrhart was able to show that belemnites, long thought to be inorganic fossils, had a distinctive chambered shell “analogous to that of the living cephalopod molluscs Nautilus and Spirula. Combined with his careful analysis of the mode of growth of the guard, this structural analogy made the organic origin of belemnites almost indisputable” (Rudwick). Ehrhart cites as his sources Scheuchzer, de Boodt, and Volkmann.

REFERENCES: LKG: XVII 134. • Rudwick, *Meaning of Fossils*, 1972: p. 88-89.

1500. — Latin, 1727 [2nd edition].

De belemnitis Suevicis dissertatio. Quo imprimis in obscuri hactenus fossilis naturam inquiritur; dein et haud paucæ observationes universum marino-terrestrium censum; itemque lithographiæ modernæ historiam spectantes exhibentur. Editio altera, multum auctior. Cum nova præfatione. Augustæ Vindelicorum, Ulmæ, Apud D.R. Merz & J.J. Mayer, 1727.

4°: 57 p., one plate.

VERY SCARCE. A much expanded edition.

Modern German transl., 1979: Balthasar Ehrhart (1700-1756) aus Memmingen (Schwaben) und seine Dissertatio de belemnitis suevicis (1727). Von Otto Wittmann. Übersetzung des lateinischen Originals von 1727 von Paul Willmann. Erlangen, Jünge, Universitätsbuchdruckerei, 1979. 48 p., illus. [AzU, QE1 .E7 no.107.]

REFERENCES: LKG: XVII 134.

1501. — German, 1745.

Physikalische Nachricht von eier gegründeten neuen Meinung, welche den Ursprung der aus der Erden kommenden verdteinten Sachen, die bisher der allgemeinen Sundlichen zugeschrieben worden, betrifft, wie solche in dem bisher rargesehen buche enthalten ist, das den Titul hat: De crostacei – di A.L. Moro, nebst vielen Anmerkungen. Memmingen, 1745.

8°: VERY SCARCE.

REFERENCES: LKG: XVII 27b.

EHRMANN, Friedrich Ludwig. (BORN: Strasbourg, Alsace, France, 1741; DIED: Strasbourg, Alsace, France, 17 February 1800) *German physicist.*

Son of a well respected physician, Ehrmann was a professor of physics at the University of Strasbourg.

REFERENCES: DBA: I 271, 111-115; II 316, 157-158. • Ferchl. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, cols. 648-9. • WBI.

1502. — German, 1786 [First edition].

Versuch | einer | Schmelzkunst | mit Beyhülfe der Fenerluft | von | Friedrich Ludwig Ehrmann, [...3 lines of titles and memberships...] | [ornament] | Mit einer Kupfertafel. | [double rule] | Straßburg, 1786. | verlegt Johann Georg Treuttel. | [rule] | Mit hoher Erlaubniß.

8°: [i]-xix, [1]-252 p., one engraved plate.

VERY SCARCE. Description of the first “Knallgebläses,” (oxygen gas blowpipe) of Ehrmann after Lavoisier’s design, and containing numerous interesting and original experiments in smelting procedures. It was considered important enough to be translated by order of the French Academy [which see next entry].

REFERENCES: BL: [1035.b.25.]. • Ferchl: 139. • *Freilich Sale Catalog*: no. 166. • Hoover Collection: no. 272 & 273. • LKG: XI 12a. • Partington, *History of Chemistry*, 1961-70: 3, 461. • Zeitlinger & Sotheran, *Bibliotheca Chemica*, 1921-52: 1, no. 1153 [“scarce.”].

1503. French transl., 1787: Essai | d’un | Art de Fusion | a l’aide de l’air du feu, | ou air vital | Par Mr. Ehrmann, Licencié en Droit, | [...4 lines of titles and memberships...] | Avec une planche gravée en taille-douce. | Traduit de l’allemand par M. de Fontallard | & revu par l’Auteur. | Suivi des Mémoires | de Mr. Lavoisier, de l’Académie Royale | des Sciences, | sur le même Sujet. | [double rule] | A Strasbourg, 1787. | Chez Jean George Treuttel, Libraire. | & à Paris, | Chez Cuchet, rue & hôtel Serpente. | [rule] | Avec Approbation & Privilège du Roi.

8°:)(8)(8 A-Z⁸; 196ℓ; [i]-xxxii, [1]-366 p., 3 folding engraved plates (apparatus).

CONTENTS: [i-ii], Title page, verso blank; [iii]-[iv], Dedication; [v]-[vi], “Extrait des Registres de l’Académie Royale des Sciences du vingt-trois Juin 1786.”; [vii]-xxxii, “Sommaire.”; xxxii, “Avis.”; [1]-231, Text.; 232-233, “Suppléments.”; 234, “Errata.”; [235], Sectional title page, “Mémoires | sur le même sujet | Par M. Lavoisier, | Publiés dans les Mémoires de l’Académie Royale des | Sciences années 1782. & 1783.”; [236], Blank.; 237-317, “De l’action du feu animé par l’air vital, ...”; 318-334, “Mémoire sur l’effet que produit sur les pierres précieuses ...”; 335-360, “Mémoire sur un moyen d’augmenter considérablement l’action du feu...”; 361-365, “Explication des Figures, commune aux deux mémoires.”; 366, “Errata.”; [At end], 3 folding plates of apparatus.

SCARCE. This is a French translation by de Fontallard of *Versuch einer Schmelzkunst mit Beyhülfe der Fenerluft* (Strassburg, 1786). It embodies Ehrmann’s experiments on fusion, which includes one of the earliest descriptions and illustrations of the oxygen blowpipe, which would become important in high temperature study of minerals. Ehrmann was a correspondent of Lavoisier, who conducted a series of experiments on the effects of high temperature on various substances. Lavoisier requested that his own memoirs on the subject be reprinted together with the translation of Ehrmann’s *Essai*. De Fontallard compiled and added them at the end of the book (pp. 235-349) together with a mémoire by Meusnier that describes and illustrates the apparatus used by both Lavoisier and Ehrmann in their experiments (pp. 350-366).

Jean François de Fontallard. *French translator.* Acted as translator on several works during the period 1770 to 1790.

REFERENCES: BL: [1568/4645.]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899: 154. • Cole, *Chemical Literature*, 1988: no. 398. • Duveen & Klickstein, *Bibliography of Lavoisier*, 1954: 241. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 190. • Hoover Collection: no. 274. • LKG: XI 11*. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 1299. • *Observations sur la Physique, sur l’Histoire Naturelle et sur les Arts*: 30 (1787),

315 [review]. • Partington, *History of Chemistry*, 1961-70: 3, 461. • Roller & Goodman, *Catalogue*, 1976: 1, 353. • Zeitlinger & Sotheran, *Bibliotheca Chemica*, 1921-52: 1, no. 1154. (Fontallard) ABF: I 407, 329-330. • WBI.

EHRMANN, Theophilus Friedrich.

1504. — German, 1807 [German transl.].

Beschreibung der Insel St. Helena. Nach ihrer geognostischen Beschaffenheit und Bildung, nebst Nachrichten von dem Klima, der Naturgeschichte und den Bewohnern derselben. Aus dem Englisch übersetzt und mit Anmerkung herausgegeben von T.F. Ehrmann. Weimar, 1807.

8°. Description of the island of St. Helena, including information on the climate, geology, and natural history. VERY SCARCE.

REFERENCES: BL: • LKG: XIV 889. • NUC: [no copy listed].

EICHLER, G.C.

Fossilia Diluvii universalis monumenta, præside J.G. Baiero ... sistet ... G.C. Eichler. Altorfii, 1712.

See: Baier, Johannes Guilielmus

EICHWALD, Karl Eduard Ivanovich. (BORN: Jelgava, Latvia, 4 July 1795; DIED: St. Petersburg, Russia, 16 November 1876) *Latvian geologist & naturalist*.

Eichwald (or the Russian Eikhval'd) studied medicine and natural sciences at the University of Berlin, 1814-17. Returning to Russia, he served as professor at the universities of Dorpat (present-day Tartu), 1821, Kazan, 1823, and Wilno (present-day Vilnius), 1829, and the St. Petersburg Medical-Surgical Academy, 1838-51. During this last appointment, he also lectured on paleontology at the St. Petersburg Mining Institute. He made several extended trips throughout the Urals and western Russia. Eichwald wrote on many subjects besides mineralogy. These include geology, paleontology, geography, plants and animals. In the field of zoology, he discovered many species new to Russia, and wrote *Zoologia Specialis* (3 vols., St. Petersburg, 1829-31), which outlined a classification of animals based on comparative anatomy, physiology, and paleontology. He also wrote numerous textbooks for use in Russia's universities. Eichwald was a corresponding member of the St. Petersburg Academy of Sciences from 1826.

REFERENCES: DSB: 4, 307-9 [by V.V. Tikhomirov]. • *Great Soviet Encyclopedia*: 29, 334. • Poggendorff: 1, col. 650. • Raikov, B.E., *Russkie Biologi-Evoliutsionisty do Darvina* [in Russian]. Moscow-Leningrad, 1951. See volume 2, pages 321-89. • Sarjeant, *Geologists*, 1980: 2, 951. • *Verhandlungen Geologischen Reichsanstalt*, Wien: 7 (1876), 832 [obituary]. • Walter, C.F., *Viro excellentissimo et doctissimo Dr. Eduardo de Eichwald, memoriorum recolenti d. 18. m maii MDCCCLXIX*. St. Petersburg, 1869. • Zvorykin, *Biograficheskii Slovar*, 1958: 2, 407.

1505. — Russian, 1844 [First edition].

Ориктогнозія | Преимущественно Въ Отношеніи | Къ Россіи | И | Съ Присовокупленіемъ Употребленія Минераловъ | Сосмаеленнал | Академнкомъ Э. Эйхвалдомъ. | [ornate rule] | Санктпетербургъ. | 1844.

[TRANSLITERATED TITLE:]

Oriktognoziia | Preimshchestvno V Otnosheniy

ОРИКТОГНОЗИЯ

ПРЕИМУЩЕСТВЕННО ВЪ ОТНОШЕНИИ

КЪ РОССІИ

И

СЪ ПРИСОВОКУПЛЕНІЕМЪ УПОТРЕБЛЕНІЯ МИНЕРАЛОВЪ.

Составленная

АКАДЕМИКОМЪ Э. ЭЙХВАЛДОМЪ.

САНКТПЕТЕРБУРГЪ.

1844.

ORIKTOGNOZIA, 1844

| K Rossi | I | S Prisovokupleniem Upotreblenia Mineralov | Sosmavlennal | Akademnikom E. Eikhval'dom. | [ornate rule] | Sanktpeterburg. | 1844.

8°: [i]-x, [1]-377, [1] p.

RARE. In his textbook, *Oryctognosy mainly with Regards to Russia*, Eichwald has focused his descriptions on those mineralogical species found in the Russian empire. He was able to rely on his own extensive exploration of the country to write comprehensively on the subject. Eichwald also introduces his new mineralogical classification based on chemistry, which on sound arguments excludes liquids and gases from mineralogy.

REFERENCES: BL: [no copy listed]. • NUC: • Povarennykh, *Definition of Mineral*, 1964: p. 44. • Puzuirevski, *Katalogia Bibliotekia*, 1867: [no copy listed].

EIKHVAL'D, Karl Eduard Ivanovich.

See: Eichwald, Karl Eduard Ivanovich.

EILENBURG, Christian Heinrich. (BORN: May 1710; DIED: Dresden, Germany, 29 July 1771) *German museum curator*.

Eilenburg matriculated at the University of Leipzig on the 27th April 1731. After graduation, he travelled to Dresden. At the beginning of 1741, he became "adjunkt" to the Gallerie des Sciences. There he helped Heucher arrange the collections. On the 26th February 1746, Eilenburg was named Inspector of the natural history and mineral cabinets.

REFERENCES: DBA: I 273, 238-240. • Fischer, *Mineralogie in Sachsen*, 1939: 91-2 & 104-9. • Jöcher,

EISENHART

Gelehrten-Lexikon, Supplement. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • WBI.



KURZER ENTWURF, 1755

1506. — German & French, 1755.

[German title page reads:] Kurzer Entwurf | der | königlichen | Naturalienkammer | zu | Dresden. | [ornament] | [rule] | Mit allergnädigster Freyheit. | [rule] | Dresden und Leipzig | In der Waltherischen Buchhandlung. 1755.

[FRENCH TITLE PAGE READS:]

Description | Du Cabinet Roial | De Dresde | Touchant | L'Histoire Naturelle. | [ornament] | [rule] | Avec Privilège de Sa Majesté. | [rule] | a Dresde et a Leipsic | Ches George Conrad Walther, | Libraire Du Roi. 1755.

4°: π^2 A-Z⁴ Aa-Bb⁴ Cc²; 105 ℓ .; [4], [1]-102, [1]-102, [1] p., engraved title vignette, 2 engraved headpieces, 2 folding plates. The pagination is the same on consecutive pages with the German and French text interleaved. For example, page 20 of German text is faced on the opposite page with page 20 of the French. This is followed by page 21 of French followed by page 21 of German, etc. PAGE SIZE: 280 x 210 mm.

CONTENTS: π 1rv, German title page, verso blank.; π 2rv, French title page, verso blank.; A1r, "Vorbericht. | [ornate rule] | Discours Preliminaire.;" A1v-2C2r, Text.; 2C2v, "Errata."

VERY SCARCE. Describes the natural history collections of the Zwinger Museum at Dresden;

these included mineral, fossil, botanical, anatomical, zoological, and coral (shell). The author gives a history of each collection and comments on many of the highlights of this great museum. The plates show the floor plan of the museum. The first separate guide to the Royal natural history collections housed in the magnificent baroque Zwinger in Dresden, which also contained the print cabinet. This work was one of the by-products of August the Strong's reorganization of the old *Wunderkammer* into specialized collections, and contains an account of the minerals, petrifications, animal skeletons and specimens, corals and shells. The final chapter contains a description of a model of Solomon's temple, constructed over a period of twenty years from Biblical references by a Hamburg gentleman named Schott.

The work described here has both the German and French texts combined. Two other states of the catalog exist, one consisting solely of the German text, the other completely in French. Both of these were published in 1755.

REFERENCES: BL: [no copy listed]. • Fischer, *Mineralogie in Sachsen*, 1939: 133-6. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 19. • *Freilich Sale Catalog*: no. 167 [German text only]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 263. • *Göttingische gelehrte Anzeigen*: 1755, 1288. • *Hamburgische Magazin*: 16, 160. • Murray, *Museums*, 1904: 1, 208 & 2, 213.

EISENHART, Johann.

1507. — Latin, 1681.

De regali metallifodinarum iure et partibus metallicis liber singularis cui praemittitur kurtze Fürststellung des im heil röom. Reich teutscher Nation und benachbarten Koonigreichen hergebrachten Berg-Regals auctore Joan Eisenhart. Helmeſtadii, Typis & sumptib. haeredum Henrici Davidis Mülleri, 1681.

8°:)(4 a-c⁴ A-Y⁴; ?? ℓ .; [8], 24, 158, [18] p. Ornamental initials and headpieces. VERY SCARCE.

REFERENCES: Hoover Collection: no. 275.

EKEBERG, Anders Gustaf. (BORN: Stockholm, Sweden, 16 January 1767; DIED: Uppsala, Sweden, 11 February 1813) *Swedish chemist & mineralogist.*

Came to Upsala 1784 and studied under, among others, Thunberg and defended altogether six theses in natural history between 1787 and 1800. He was hired 1799 by the Upsala Academy as a lecturer and laborator in chemistry. His major contribution to science was the naming of yttria and the discovery of tantalum. Yttria was named in a follow up article (KVAH 1797, 156) on the black mineral gadolinite and the new "earth" described therein by Johan Gadolin (KVAH 1794). Five years later he published an article (KVAH 1802, 68) where he compared yttrium and beryllium (ytterjord vs berylljord), in it he reports on a new mineral yttrotantal (yttrotantalite) that apart from yttrium also contains a new metal tantalum. He was a member of the Royal Swedish academy of Sciences (1799) as well as the Society of Sciences in Uppsala (1810). Ekeberg suffered from weak helth and died only 46 years old. [Entry by Johan Kjellman]

REFERENCES: Anon., "Academie-adjuncten och Chemie-laboratorn i Upsala, Mag. And. Gust. Ekebergs

Biographie,” *Kongl. Vetenskaps-Academiens Handlingar*, 1813, 276-9 p. • *Biographiskt Lexicon*. • DSB: 4, 343-4. • Personal communication [Entry by Johann Kjellman]. • Poggendorff: 1, cols. 655-6. • SBA: Scandinavian Biographical Archive: B-060, 364. • *Svenskt Biografiskt Handlexikon*. • *Svenskt Biografiskt Lexikon*: 12, 604-?? • WBI. • *World Who's Who in Science*: 516.

1508. — Latin, 1796 [Dissertation].

Dissertatio chemica | de | Topazio, | [rule] | cujus partem primam | suffrag. ampliss. ord. philos. | publico judicio subjiunt | Mag. And. G. Ekeberg, | Chemiæ Docens, Stip. Sparf. | et | Jah. Christoph Kewenter, | Stip. Pip. | Uplandi. | In audit. Gust. Maj. d. xxiii Martii MDCCXCVI. | H.S. | [ornate rule] | Upsaliæ, | Litteris Joh. Fr. Edman, Reg. Acad. Typogr.

8°: A4 B1; 5ℓ.; [1]-10 p.

CONTENTS: [1], Title page.; [2-4], Dedications.; [5]-10, Text.

VERY SCARCE. Chemical analysis of brazilian topaz where Ekeberg applies Klaproth's methods for dissolving hard minerals. Hans Christopher Kewenter [1775-1839]. [Entry by Johan Kjellman]

REFERENCES: BL: [RB.23.a.15142]. • Förf, Titel, år.

EKEBERG, Karl Gustaf. (BORN: 10 June 1716; DIED: 14 April 1784) *Swedish explorer*.

REFERENCES: *Biographiskt Lexicon*. • *Catalogue of Portraits of Naturalists*: 396-7 [2 portraits listed]. • Poggendorff: 1, col. 655. • SBA: Scandinavian Biographical Archive: B-060, 366-371. • *Svenskt Biografiskt Handlexikon*. • *Svenskt Biografiskt Lexikon*: 12, 599-??. • WBI.

1509. — Swedish, 1773.

Capitaine Carl Gustav Ekebergs ostindiska resa, åren 1770 och 1771. Beskrefven uti bref til Kongl. Svenska vet. academiens secreterare. Stockholm: Tryckt på eget förlag hos Fougst, 1773.

8°: [8], 170, [2] p., one folding engraved map “Charta öfver Cap Godt Hopp,” 5 folding engraved plates.

VERY SCARCE. Privately published, this work concerns various voyages and travels undertaken by the author throughout Asia, especially China and the East India's. The author, Captain Ekeberg, the most famous of all the captains in the Swedish East India Company, and a friend of Linnaeus, whom he provided with much material from his voyages, drew the views and the map in this book. He also engraved the map and one view, the other four views were engraved by Olof Jacobsson Årre.

Facsimile reprint, 1970: Ostindisk resa åren 1770 och 1771 beskrefven uti bref til Kongl. Svenska Vet. Academiens secreterare. [16], 170, [1] p., 5 plates.

REFERENCES: Dana's 7th (Bibliography): 71. • LKG: XIV 876.

1510. — German, 1785.

Ostindische Reise in den Jahren 1770 und 1771. In drey briefen an den secretair der Königl. Schwedischen Academie der Wissenschaften beschreiben.

Aus dem schwedischen übersetzt. Nebst einem Anhang geographischer, naturhistorischer und wissenschaftlicher nachrichten Schina und die Chinesische Tartarey betreffend. Aus dem Französischen übersetzt. Dresden und Leipzig: J.G.I. Breitkopf, 1785.

8°: [8], 271 p.

VERY SCARCE. Translation by Jean Bernoulli [1744-1807]. The appendix is translated from the “Eloge de la ville de Moukden et de ses environs; poëme composé par Klen-Long, empereur de la Chine ... Tr. en françois par le P. Amlot ... et publié par M. Deguignes” (Paris, 1770).

REFERENCES: LKG: XIV 877a.

EKKARD, Friedrich.

1511. — German, 1813-5.

Islands Natur- und Volkskunde, nebst der wesentlichen Örterkunde, aus neuern Beobachtungen geschöpft, besonders aus denen drei gelehrter Skoten, von Friedrich Ekkard. Kopenhagen, G. Bonnier, 1813-5.

2 vols.

VERY SCARCE. Describes various aspects of the people and natural history of Iceland, including an account of its minerals.

REFERENCES: LKG: XIV 45**.

ELDERHORST, William. (BORN: Hannover, Germany, 30 September 1828; DIED: Maracaibo, Venezuela, 28 July 1861) *German chemist*.

Elderhorst was the son of an army officer, and consequently began his career as a military cadet. He was released from service, however, due to weak eyesight. Thereafter, he studied chemistry at the University of Göttingen. In 1853, Elderhorst emigrated to The United States and worked in drugstores in Charleston, South Carolina and New York City. He also gave private instruction in chemistry. In 1855, he was appointed professor of theoretical and practical chemistry at the Rensselaer Polytechnic Institute. In this capacity, he was an important instrument in transferring the techniques of the German chemical school to his American students.

REFERENCES: *American Chemists & Chemical Engineers*: 1, 139-40 [by S. Rezneck].

1512. — English, 1856 [First edition].

Manual of blowpipe-analysis, for the use of students by William Elderhorst. New York, G.P. Putnam, 1856.

8°: viii, 77, [25] p.

VERY SCARCE. This instructional manual of blowpipe analysis covers apparatus, reagents, general blow-pipe analysis, processing of ores, inorganic compounds, determination of minerals, flame reactions, metallic oxides, specific gravity using the Jolly balance, etc.

REFERENCES: BL. • NUC.

1513. 2nd edition, 1861: A | Manual | Of | Blowpipe-Analysis, | And | Determinative Mineralogy. | By | William Elderhorst, M.D., | Professor Of Chemistry In The Rensselaer Polytechnic Institute. | Second Edition, |

ELHUYAR Y LUBICE

Revised And Greatly Enlarged. | [rule] | Philadelphia: | T. Ellwood Zell. | No. 478 Market Street. | 1861.

8°: [i]-xviii, [2], [13]-176 p., tables. PAGE SIZE: 188 x 120 mm.

CONTENTS: [i-ii], Title page, verso "Entered, according to Act of Congress, in the year 1860, | ..."; [iii]-iv, "Preface."—March, 1860.; [v]-xi, "Introduction."; xii-xiii, "Collection Of Substances."; [xiv], Blank.; [xv]-xviii, "Table Of Contents."; [1 pg], "Abbreviations."; [1 pg], Blank.; [13]-141, Text.; [142], Blank.; [143]-167, "Tables."; [168], Blank.; [169]-176, "Index."

SCARCE. Cover title: Blowpipe-analysis.

REFERENCES: BL: [8905.aaa.26.]. • NUC.

1514. 3rd edition, 1866: A Manual | Of | Blow-Pipe Analysis. | And | Determinative Mineralogy. | By | William Elderhorst, M.D., | Professor Of Chemistry In The Rensselaer Polytechnic Institute. | Third Edition. | [rule] | Philadelphia: | T. Ellwood Zell. | Nos. 17 and 19 South Sixth Street. | New York: | D. Van Nostrand.

8°: [i]-xx, 21-179 p., tables. PAGE SIZE: 192 x 124 mm. SCARCE.

CONTENTS: [i-ii], Half title page, verso blank (not present in copy examined); [iii]-iv, Title page, verso "Entered according to Act of Congress, in the year 1866, ..."; v-vi, "Preface."—signed William Elderhorst.; vii-xiii, "Introduction."; xiv-xv, "Collection Of Substances."; [xvi], Blank.; xvii-xx, "Table Of Contents."; 21-169, Text.; [170], Blank.; [171]-179, "Index."; [1 pg], Blank.

REFERENCES: BL: [8907.aa.19.]. • NUC.

1515. 4th edition, 1874: Elderhorst's Manual | Of | Qualitative | Blow-Pipe Analysis, | And | Determinative Mineralogy. | Edited By | Henry B. Nason, Ph.D., | Rensselaer Polytechnic Institute, Troy, N.Y. | And | Charles F. Chandler, Ph.D., | Columbia College School Of Mines, New York. | Fourth Edition, Revised and Enlarged. | Philadelphia And London: | T. Ellwood Zell. | 1874.

8°: xv, 312 p., tables.

SCARCE. Edited by Henry B. Nason and Charles F. Chandler.

Charles F. Chandler. (BORN: ; DIED:). Chandler was an instructor at the Columbia School of Mines, New York.

Henry Bradford Nason. (BORN: 1831; DIED: 1895) *American mineralogist & chemist.* Nason was an instructor at the Rensselaer Polytechnic Institute in Troy, New York.

REFERENCES: NUC. (**Chandler**) (Nason) ABA: I 1173, 77-78, 101-105. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • Herringshaw's *National Library of American Biography*. • *National Cyclopedia of American Biography*. • WBI.

1516. 5th edition, 1874: Elderhorst's Manual | Of | Qualitative | Blow-Pipe Analysis, | And | Determinative Mineralogy. | Edited By | Henry B. Nason, Ph.D., | Rensselaer Polytechnic Institute, Troy, N.Y. | And | Charles F. Chandler, Ph.D., | Columbia College School Of Mines, New York. | Fifth Edition, Revised and Enlarged. | Philadelphia And London: | T. Ellwood Zell. | 1874.

8°: xv, 312 p., tables. SCARCE.

REFERENCES: NUC.

1517. 6th edition, 1874: Elderhorst's Manual | Of | Qualitative | Blow-Pipe Analysis, | And | Determinative Mineralogy. | Edited By | Henry B. Nason, Ph.D., | Rensselaer Polytechnic Institute, Troy, N.Y. | And | Charles F. Chandler, Ph.D., | Columbia College School Of Mines, New York. | Sixth Edition, Revised and Enlarged. | Philadelphia: | Porter & Coates, | No. Chestnut Street.

8°: xvi, 312 p., frontispiece, tables, 26 illus. SCARCE.

REFERENCES: NUC.

1518. 7th edition, 1881: Elderhorst's Manual | Rewritten And Revised. | [rule] | Manual | Of | Qualitative | Blowpipe Analysis, | And | Determinative Mineralogy. | By | Henry B. Nason, | [...3 lines of titles and memberships] | [ornament] | Philadelphia: | Porter & Coates.

8°: 371 p., frontispiece, tables, illus. VERY SCARCE.

REFERENCES: NUC.

ELHUYAR Y LUBICE, Juan José de. (BORN: Logroño, Spain, 1754; DIED: 1796) *Spanish chemist.*

Chemist, studied the discipline, the same as his brother Fausto (ON), with Hilaire - Marin Rouelle in Paris. He was Werners pupil in Freiberg and Bergmans in Upsala. With his brother, he discover the titanium.

He was send to Nueva Granada to charge obtain metals by the method of smelting, being charged at the same time, to teach to the local technicians.

REFERENCES: Caycedo, Bernardo J. *D'Elhuyar y el siglo XVIII neogranadino*. Bogotá, Editorial Kelly, 1971. 316 p., frontispiece (portrait). [Series: *Ediciones de la revista Ximénez de Quesada*, no. 23.; A biography of Juan José de Elhuyar.].

1519. — English, 1785.

A Chemical Analysis of Wolfram and examination of a new metal, which enters into its composition ... London, Printed for G. Nicol, 1785.

4°: [1]-67, [1] p.

RARE. Translation by Charles Cullen of *Análisis Químico del Volfram* (??, ??), which reported the process for isolating of the new heavy element, tungsten.

REFERENCES: BL: [B.550.(4.)]. • Bolton, Henry Carrington. "Ancient methods of filtration," *Popular Science Monthly*, 1880, 8 p: p. 425. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 229. • Hoover Collection: no. 276. • LKG: XVI 401. • Weeks, *Discovery of the Elements*, 1934: p. 57-8.

1520. German transl., 1786: Chemische Zergliederung des Wolframs, und Untersuchung eines neuen darin befindlichen Metalles. Aus dem Englischen des Herrn Carl Cullen übersetzt von Friedrich Albrecht Carl Gren ... Nebst Beyträgen zur Geschichte des Wolframs und Tungsteins. Halle, 1786.

8°: 108 p.

RARE. Translated by Friedrich Albrecht Carl Gren [??-??].

REFERENCES: BL: [1035.c.22.]. • LKG: XVI 402a.

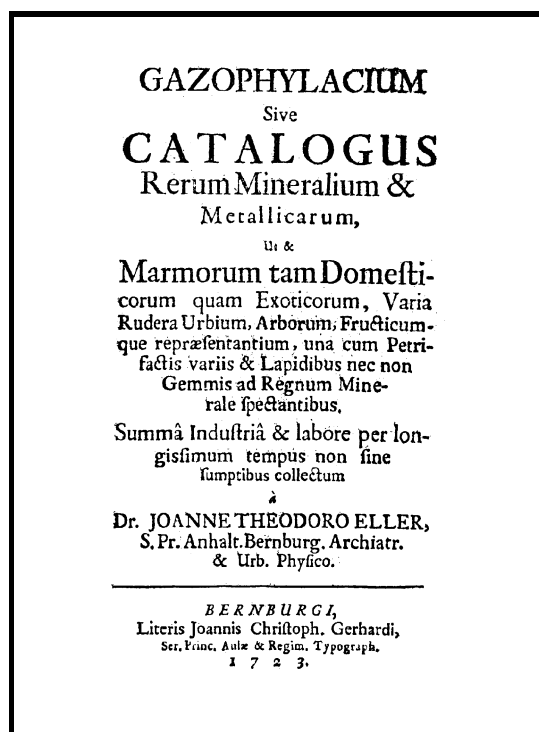


ELLER

ELLER VON BROCKHAUSEN, Johann Theodor. (BORN: Plotzkau, Germany, 29 November 1689; DIED: Berlin, Germany, 13 September 1760) *German physician.*

Eller was educated in law at Quedlinburg and Jena, and in medicine and science at Halle, Leiden, Amsterdam, Paris and London. He was named a professor at the College of Medicine in Berlin in 1724. From 1735, Eller was the personal doctor to Friedrich the Great, who named him in 1755 to be the director of the Collegium Medico-Chirurgicum. He was elected a member of the Academie der Wissenschaften (Academy of Science) in Berlin in 1755.

REFERENCES: ADB. • *Catalogue of Portraits of Naturalists*: 398 [1 portrait listed]. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1474-5. • DSB: 4, 352-3. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • NDB: 4, 456 [by M. Stürzbecher]. • Poggendorff: 1, cols. 658-9. • Wilson, *History of Mineral Collecting*, 1994: 169. • *World Who's Who in Science*: 518.



GAZOPHYLACIUM, 1723

1521. — Latin, 1723 [Collection catalog].

Gazophylacium | Sive | Catalogus | Rerum Mineralium & | Metallicarum, | u: & | Marmorum tam Domesti- | corum quam Exoticorum, Varia | Rudera Urbium, Arborum, Fructicum- | que repræsentantium, una cum Petri- | factis variis & Lapidibus nec non | Gemmis ad Regnum Mine- | rale spectantibus. | Summâ Industriâ & labore per lon- | gissimum tempus non sine | sumptibus collectum | à | Dr. Joanne Theodoro Eller, | S. Pr. Anhalt. Bernburg. Archiatr. | & Urb. Physico.

| [rule] | Bernburgi, | Literis Joannis Christoph. Gerhardi, | Ser. Princ. Aulæ & Regim. Typograph. | 1723.

12°: [1]-144 p.

RARE. Besides various examples of mineralogical specimens, Eller's cabinet contained many samples of marble from local and foreign locations, gemstones, semiprecious stones, petrified plants and fruits and other fossils, earths and stones. Clearly, Eller devoted a great amount of time and attention to building his collection.

REFERENCES: BL: [987.a.19.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 260. • LKG: XV 6. • Murray, *Museums*, 1904: 1, 229.

ELTESTER, ().

1522. — German, 1781 [Sale catalog].

Verzeichniss einer Sammlung auserlesener Steine, Versteinerungen, Minern, auch seltener Curiosorum, welche der verstorbene Hofrath Eltester hinterlassen hat, und welche den [date to be supplied by hand] Februar 1781, und folgende Tage von dem Königl. Auctions-Comissario Hrn. Böhme ... öffentlich an den Meistbiethenden verkauft werden sollen. Berlin, J.M. Kunst, 1781.

8°: 29 p.

VERY RARE. Sale catalogue of the natural history cabinet formed by Privy Councillor Eltester. This was an interesting collection, rich in fossils, shells, and "curiosities" that lists 749 lots.

REFERENCES: BL. • Jonathan Hill, Bookseller: cat. 133 (2000), no. 12. • NUC: [no copy listed].

EMMERLING, Ludwig August. (BORN: Elleben near Arnstadt, Schwarzberg, Sondershausen, Germany, 7 May 1765; DIED: Darmstadt, Hesse, Germany, 24 December 1841) *German mineralogist.*

Emmerling was first a docent then a professor of mineralogy and mining science at the University of Giessen. He was an advisor to the state of Giessen on mining matters before being made in 1821, the overseer of mining in Darmstadt.

REFERENCES: ADB: 6, 87. • DBA: I 280, 306-315; II 327, 125-126. • Ferchl: 142. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Poggendorff: 1, cols. 663 & 1561. • Sarjeant, *Geologists*, 1980: 2, 957. • WBI.

1523. — German, 1793-7 [First edition].

Lehrbuch | der | Mineralogie | [rule] | entworfen | von | Ludwig August Emmerling, | [...2 lines of titles and memberships...] | [ornate rule] | Quae praesenti opusculo defunt, suppleat aetas. | Quintilian. | [rule] | Erster [-Dritter] Theil. | [rule] | [double rule] | Giessen | bey Georg Friedrich Heyer | 1793.

3 vols. [VOL 1: 1793] 8°: a-b⁸ A-Oo⁸; 312ℓ; [i]-xxxii, [1]-589, [3] p. [VOL 2: 1796] 8°:)(⁴A-Oo⁸ χ⁴; 303ℓ; [2], [i]-vi, [1]-592, [8] p. [VOL 3: 1797] 8°:)(⁴A-Ll⁸; 275ℓ; [i]-viii, [1]-535, [7] p.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii-iv], Dedication to Ludwig X.; [v]-xxxii, "Vorrede."; [1], Sectional title page, "Erste Klasse | Erd- und Steinarten=

EMMONS

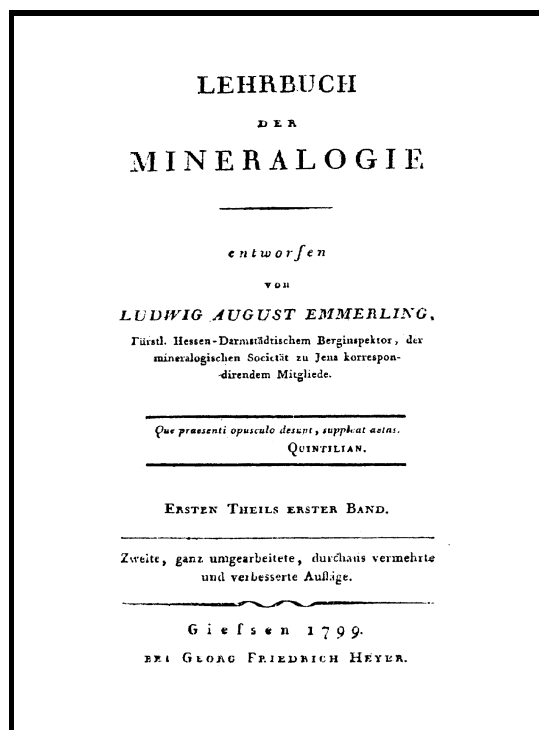
[Geschlechter.]; [2], Blank.; [3]-576, Text.; 576-589, "Anhang.;" [1 pg], "Druckfehler.;" [2 pgs], Publisher's list.

[Vol 2] [2 pgs], Title page, verso blank.; [i]-vi, "Vorrede.;" [1], Sectional title page, "Zweite Klasse | Salz-Geschlechter.;" [2], Blank.; [3]-592, Text.; [6 pgs], "Druckfehler.;" [2 pgs], Publisher's list.

[Vol 3] [i-ii], Title page, verso blank.; [iii]-viii, "Vorrede.;" [1], Sectional title page, "Von den | Gebirgsarten.;" [2], Blank.; [3]-510, Text.; 511-535, "Register.;" [7 pgs], "Druckfehler."

RARE. First edition of Emmerling's *Textbook of Mineralogy*, which closely follows Werner's theories.

REFERENCES: BL: [987.g.26.-28.]. • Dana's 7th (Bibliography): 70. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 29-30. • LKG: XII 133. • Roller & Goodman, *Catalogue*, 1976: 1, 361.



LEHRBUCH DER MINERALOGIE, 1799

1524. 2nd edition, 1799-1802: Lehrbuch | Der | Mineralogie | [tapered rule] | entworfen | von | Ludwig August Emmerling, | [...3 lines of titles and memberships...] | [rule] | Que praesenti opusculo desunt, supplcat aetnas. | Quintilian. | [rule] | Ersten Theils erster [-zweiter] Band. | [rule] | Zweite, ganz umgearbeitete, durchaus vermehrte | und verbesserte Auflage. | [ornate rule] | Giessen 1799. [-1802.] | bei Georg Friedrich Heyer.

2 parts in 2 vols. [VOL 1: 1799] 8°: [i]-xlvi, [2], [1]-499, [3] p. [VOL 2: 1802] 8°: [i]-xxx, [1]-928 p. PAGE SIZE: 186 x 110 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii-iv], Dedication.; [v]-xlii, "Vorrede | zur Ersten Auflage."—signed Emmerling, 3 April 1793.; [xliii]-xlvi, "Vorrede | zur zweiten Auflage."—signed Emmerling, 25 July 1799.; [1 pg], Sectional title page, "Allgemeine Grundsätze | der | Oryktognostischen | Klassifikation.;" [1 pg], Blank.; [1]-499, Text.; [1 pg], Blank.; [2 pgs], "Berichtigungen."

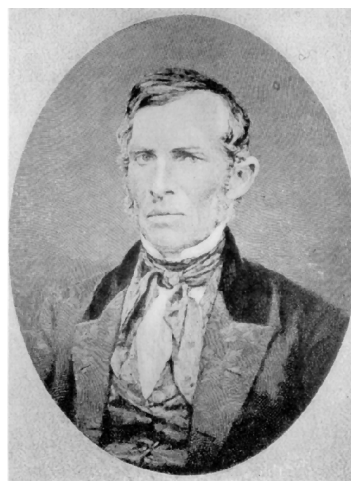
[Vol 2] [i-ii], Title page, verso "Die Wahrheit ist

kein nahes Ziel.;" [iii], Dedication.; [iv], Blank.; [v]-xxx, "Vorrede.;" [1]-928, Text.

VERY SCARCE. Enlarged edition, correcting many mistakes published in the first edition. The author basically supports Werner's mineralogical theories, but has modified and added to the descriptions of the chemical composition of minerals. These revisions came about principally because of Klaproth's discoveries in the chemical makeup of minerals.

The Introduction covers topics on the philosophy of mineral classification, the nomenclature of mineral names, and a system of external characteristics. The classification is then presented in a tabular overview followed by the descriptive mineralogy.

REFERENCES: BL: [973.c.14.]. • Dana's 7th (Bibliography): 70. • *Edinburgh Review*: 3, 285-7. • LKG: XII 133.



EMMONS

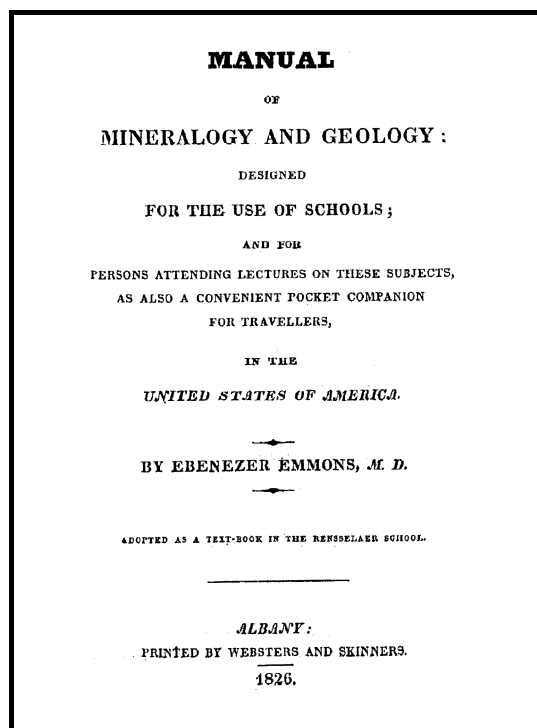
EMMONS, Ebenezer. (BORN: Middlefield, Massachusetts, U.S.A., 16 May 1799; DIED: Brunswick County, North Carolina, U.S.A., 1 October 1863) *American physician & geologist.*

Born the son of a farmer, Emmons attended the Rensselaer Polytechnic Institute. There he became an assistant of the American geologist Amos Eaton [1776–1842]. After graduating in 1826, Emmons opened a medical practice specializing in obstetrics in Chester, Mass. From 1828 to 1834, he delivered lectures in chemistry at Williams College. This led in 1833 to an appointment as professor of natural history, a position he held until 1859, at which time Emmons was made professor of geology and mineralogy.

As an author, Emmons wrote on agriculture, geology and mineralogy. His most important book was *Geology ... of the Second Geological District*, which was issued as part of Division 4 of the *Natural History of New York* (4 vols., Albany, 1842). In this work, Emmons created the first comprehensive picture of the geology of New York by devising his own influential system of geological classification.

REFERENCES: ABA: I 506, 82-89. • *American Chemists & Chemical Engineers*: 2, 85-6 [by W.D. Miles]. • *Appleton Cyclopaedia of American Biography*. • Barr, *Index to Biographical Fragments*, 1973: 79. • Cleavelly, *World Palaeontological Collections*, 1983: 111. • DAB: 3, 149 [by G.P. Merrill]. • Drake, *Dictionary of American Biography*, 1872. • DSB: 4, 363-5 [by C.J. Schner]. • Elliott, *Biographical Index*, 1990: 73. • Elliott, *Biographical Dictionary*, 1979: 87. • *Encyclopaedia Britannica*, 11th edition. • *Herringshaw's*

National Library of American Biography. • Ireland, *Index to Scientists*, 1962: 202. • Lambrecht & Quenstedt, *Catalogus*, 1938: 128. • *National Cyclopaedia of American Biography.* • Poggendorff: 3, 408. • Sarjeant, *Geologists*, 1980: 2, 957-8. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 407. • WBI. • *World Who's Who in Science*: 523.



MANUAL, 1826

1525. — English, 1826 [First edition].

Manual | of | Mineralogy and Geology: | designed | for the use of schools; | and for | persons attending lectures on these subjects, | as also a convenient pocket companion | for travellers, | in the United States of America. | [ornate rule] | By Ebenezer Emmons, M.D. | [ornate rule] | Adopted as a Text-Book in the Rensselaer School. | [rule] | Albany: | Printed by Websters and Skinners. | [rule] | 1826.

12° (in 6s): 1-2⁶ A-B⁶ 3-18⁶ 197; 127ℓ.; [i]-xxiii, [1], [1]-229, [1] p. PAGE SIZE: 178 x 104 mm.

CONTENTS: [i-ii], Title page, verso "Northern District of New York. ..."; [iii]-v, "Preface."; [vi], Blank.; [vii]-xxiii, "Tabular View of the Arrangement Adopted in this Work."; [1 pg], Blank.; [1]-22, "Introduction to the Study of Mineralogy."; [2 pgs], Blanks.; [25]-178, Text of descriptive mineralogy.; [179]-181, "Introduction to the Study of Geology."; [182], "Arrangement of Rocks."; [183]-206, "General Description of North American Rocks."; 207-211, "Explanation of Terms, &c. Commonly used in mineralogical and geological descriptions."; [212]-222, "Table of Synonymes."; [223]-229, "Index."; [1 pg], Addenda and errata.

VERY SCARCE. After Cleaveland's encyclopedic *Treatise* appeared in 1816 and 1822, many people began

to have an interest in the minerals of the United States, and from this interest demand arose for a short, simple, descriptive mineralogy. Although Cleaveland's work was a comprehensive reference, it was too bulky and expensive to readily be used as a field guide. Under these conditions Emmons published his *Manual* to favorable response.

The book adopts the classification of MOHS but substitutes BROOKE's system of crystallography. The individual mineral descriptions are clear and concise, giving the user ample general information while stressing known localities in the United States. Unfortunately use as a textbook undoubtedly caused many copies of this book to quickly dilapidate making both this edition and the second rare collectibles.

REFERENCES: BL: [no copy listed]. • Hazen & Hazen, *American Geological Literature*, 1980. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 361. • Ward & Carozzi, *Geology Emerging*, 1984: no. 743.

1526. 2nd edition, 1832: Manual | of | Mineralogy and Geology. | [rule] | By | Ebenezer Emmons, M.D. | Lectuer on Chemistry and Natural History in Williams College. | [rule] | Second Edition. | [rule] | Albany: | Webster and Skinners. | [rule] | 1832.

12° (in 6s): π⁶ 1-25⁶; 156ℓ.; [2], [i]-v, [1], [ix]-xii, [1]-299, [1] p. PAGE SIZE: 184 x 110 mm.

CONTENTS: [2 pgs], Half title page, "Manual of Mineralogy and Geology," verso blank.; [i-ii], Title page verso "Entered according to Act of Congress, in the year 1832, ..."; [iii]-v, "Preface | To The Second Edition."—signed E. Emmons, August 1832.; [1], Blank.; [ix]-xii, "Table of Contents."; [1]-269, Text.; [270], Blank.; [271]-288, "Notes Referred to in the Introduction to Mineralogy."; [289]-299, "Index."; [1 pg], Blank.

SCARCE. A thoroughly revised text which is more useable than the first attempt. In preparing this edition, Emmons has remodeled its content to facilitate instruction in the science of minerals. It was his intent to supply the student with a guide so they could satisfactorily conduct through the process of examining minerals. To facilitate this, the text included sufficient information to employ the characters of minerals substances and to trace the relations existing between the various species. The classification system of F. MOHS has like the first edition again been adopted. For crystallography, the system of H.J. BROOKE is retained. Emmons has included a few woodcuts to illustrate the crystalline forms, which was lacking from the previous edition.

The short introduction provides an overview of the definition and purpose of mineralogy. A section describing the terminology used in the crystallographic description follows. The optical and physical properties of minerals are reviewed. The theory of classification, nomenclature, characteristics and a description of physiography precede the large section devoted to descriptive mineralogy. An index concludes the work.

REFERENCES: *American Journal of Science*: 1st Series, 24 (1833), 397. • BL: [no copy listed]. • Hazen & Hazen, *American Geological Literature*, 1980. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 361.

ENCELIUS, Christophorus.

See: Entzelt, Christoph.

ENDE, Ferdinand Adolf, Freiherr von. (BORN: Celle, Germany, 1760; DIED: Mannheim, Germany, 1817) *German legal expert & astronomer.*

Ende was appointed to the post of chief appellate advisor in Celle 1803, followed by an appointment as state justice minister in Stuttgart. He became an advisor on

ENGELBRECHT

legislation in Carlsruhe. Then in 1810, he retired to Mannheim. to enjoy his hobby of astronomy.

REFERENCES: ADB. • DBA: I 281, 387-391; II 327, 387-388. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: I, col. 667. • WBI.

1527. — German, 1804.

Über Massen und Steine die aus dem Monde auf die Erde gefallen sind, von F.A. Freiherr von Ende ... Braunschweig, Friedrich Vieweg, 1804.

8°: π^3 1-11⁴ 12¹; 48^{l.}; [6], [1]-90 p.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Vorrede."; 1-90, Text.

RARE. This is a detailed account of the iron and stone masses that were reputed to fall from the sky to the earth and that had been observed since ancient times. The early 19th century witnessed a debate concerning the origins of these meteorites, and Ende provides accounts of the various theories, including those of Gassendi, Chladni, and Descartes.

REFERENCES: BL: [B.346.(1.)]. • BMC: 2, 528. • Burke, *Cosmic Debris*, 1986: p. 381 [bibliography citation only]. • LKG: XVI 351. • NUC.

ENDLICH, Frederic Miller. (BORN: Reading, Pennsylvania, U.S.A., 14 June 1851; DIED: Tucson, Arizona, U.S.A., 17 July 1899) *American mining engineer.*

Endlich was from 1872 to 1880, mineralogist and chemist at the Smithsonian Institution. During the period 1873 to 1879, he was assistant on the U.S. Geological and Geographical Surveys under F.V. Hayden [1829-1887]. From 1880, to the time of his suicide, Endlich was engaged as a mining engineer consultant in various parts of the American west.

REFERENCES: *American Chemists & Chemical Engineers*: 2, 88-9 [by W.D. Miles]. • Merrill, *History of American Geology*, 1906: p. 696.

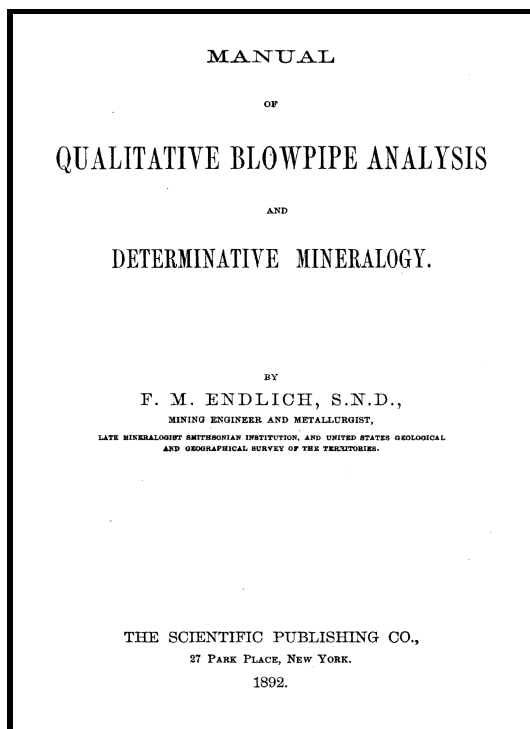
1528. — German, 1892.

Manual | Of | Qualitative Blowpipe Analysis | And | Determinative Mineralogy. | By | F.M. Endlich, S.N.D., | [...3 lines of titles and memberships...] | The Scientific Publishing Co., | 27 Park Place, New York. | 1892.

8°: [i]-xv, [3], [13]-456 p., folding colored frontispiece, 26 illus., tables. PAGE SIZE: 220 x 150 mm.

CONTENTS: [i-ii], Title page, verso "Copyrighted, 1892, ..."; [iii], Dedication to Theodor Richter.; [iv], Blank.; [v]-vi, "Preface."—dated October 1892.; [vii]-x, "Contents."; [xi], "List Of Illustrations."; [xii], "List Of Abbreviations Used."; [xiii]-xv, "Introduction."; [1 pg], Blank.; [1 pg], Sectional title page.; [1 pg], Blank.; [13]-449, Text.; [450], Blank.; [451]-456, "General Index."

SCARCE. After explaining in the preliminary pages that this book is written either for classroom instruction or self study, and that the blowpipe reactions of only the common minerals are given, Endlich in six chapters covers (I, pp. 13-33) appliances and reagents required for qualitative blowpipe analysis, (II, pp. 37-146) methods used in qualitative analysis, (III, pp. 149-161) tables giving reactions for oxides of earths and metals, (IV, pp. 165-249) prominent blowpipe reactions, (V, pp. 253-302) systematic qualitative determination of



MANUAL, 1892

compounds, and (VI, pp. 305-449), determinative tables and their application.

REFERENCES: BL: [no copy listed]. • NUC.

ENGELBRECHT, Christian August. (BORN: 1778; DIED: 1805/6) *German miner.*

REFERENCES: DBA: I 283, 208-209. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • WBI.

1529. — German, 1802.

Kurze Beschreibung des Weisssteins, einer im geognosi. Systeme bis jezt unbekannt gewesenen Gebirgsart. Im Namen der Linn. Soziet. zu Leipzig. Herausgegeben von Christian August Engelbrecht. Leipzig, 1802.

8°: 24 p. VERY SCARCE.

REFERENCES: LKG: XIII 207.

ENGELBRONNER, Carel Clemens Elias d'. (BORN: Cleve, The Netherlands, 1736; DIED: Amsterdam, The Netherlands, 1802) *Dutch mineral collector & naturalist.*

In 1760, Engelbronner was "Poorter" of Amsterdam, then apothecary at the Haarlemmerdijk (in Seba's house), and later a merchant in drugs at the Keizersgracht. His cabinet of minerals and shells was auctioned in Amsterdam on 4 December 1804.

REFERENCES: Engel, *Dutch Zoological Cabinets*, 1986: no. 438.

1530. — Latin & Dutch, 1776 [Collection catalog]. Musei Girlliani. | Catalogus | Continens præstantissima, rarissima, pretiosissima omnis



MUSEI GRILLIANI CATALOGUS, 1776

generis | Fossilia, | Ex omni Europa, utiaque India, aliisque longe dissitis | regionibus collecta; inter quæminent. | Glebæ Auri et Argenti Ingentes; | Cupri, Stanni, aliorumque regni lapidei, ut et Petrefactorum | ingens numerus ac multa Varietas. Omnia Systematico ordine, adjectis natatiliis locis, conscripta. Accedit | Pinacotheca Instructissima, | [...24 lines...] | Antonius Grill, | Celeberrimus rei fossilis cultor, | Publica sub hafta distrahent | P. Posthumus & B. de Bosch, Proxenetæ; | Amstelodami IV. Id. Aprilis MDCCLXXVI. | Pridie venditionis omnia cui videnda patebunt.

[DUTCH TITLE PAGE READS:]

Catalogus | Van het alom beroemd | Cabinet, | Van alerhande soorten der raarste, uitneemenste en Kostbaarste | Mineralien, | Door geheel Europa, Oost en Westindien, en andere afgelegene Landen by een vergadert; waar onder uitmunten, veele, zeldzame groote en ryke | Goud- en Silber-Ertzen. | [...27 lines...] | Antonie Grill, | Al het welk zal verkogt worden op Woensdag den 10de April, | 1776, en volgende dagen, te Amsteldam in 't Oudexyds Heeren | Logement, door de Makelaars P. Posthums en B. de Bosch Jeronimusz. by dewelke de Catalogus te bekomen is, mits betalende zes Stuivers aan den Armen. | Alwaar alles 's daags voor den Verkoopdag kan werden gezien.

8^o: A-O⁴; 56^l.; complex pagination due to interleaved languages, 14 plates. In Latin and Dutch, with Dutch on the odd pages and Latin text on the even pages.

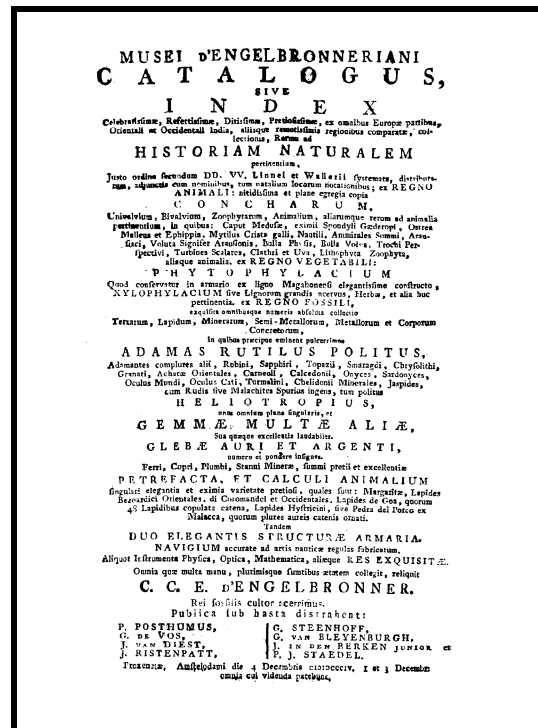
CONTENTS: [A1], Blank, verso Latin title page.; [A2r], Dutch title page.; [A2v], "Ad Lithophilos!"; [A3r], "Aan de Liefhebbers der Berg- | Stof-kunde!"; A3v-O4v, Text.

VERY RARE. Edited by Engelbronner, who added his own commentaries, this is a catalog of

the minerals and fossils contained in Anthony Grill's Wunderkammer. There are two title pages, one in Latin, the other in Dutch. The text is also in Latin and Dutch. The collection was apparently sold after Grill's death in 1783.

Anthony Grill. (BORN: Stockholm, Sweden, c1704; DIED: Amsterdam, The Netherlands, 22 March 1783) *Dutch merchant & banker*. From 1722 onwards, Grill lived and worked in Amsterdam in the "Huys met de Hoofden." He possessed a natural history cabinet especially rich in minerals, which was sold after his death.

REFERENCES: BL: [956.h.33.]. • Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 1, 390. • Engel, *Dutch Zoological Cabinets*, 1986: 101-2. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 276. • *Jenaische gelehrte Zeitungen*: 1777, 82. • LKG: XV 31. • Lugt, *Repertoire des Catalogues*, 1938-53: no. 2525. • Murray, *Museums*, 1904: 2, 267. • NUC. (Grill) *Amstelodamum*: 1951, p. 156 seq & May, 1976, p. 148 [by I.H. van Eeghen]. • *Bijdr. en Mededel. Hist. Gen. Utrecht*: 31 (1910), 329 [note]. • Engel, *Dutch Zoological Cabinets*, 1986: 101-2. • Wilson, *History of Mineral Collecting*, 1994: 173.



MUSEI d'ENGELBRONNERIANI CATALOGUS, 1804

1531. — Latin & Dutch, 1804 [Sale catalog].

[Latin title reads:] Musei d'Engelbronneriani | Catalogus, | Sive | Index | Celeberrissimæ, Refertissimæ, Ditissimæ, Pretiosissimæ, ex omnibus Europæ partibus, | Orientali et Occidentali India, aliisque remotissimis regionibus comparatæ, collectionis, Rerum ad | Historiam Naturalem | pertinentium, | Justo ordine secudum DD. VV. Linnei et Wallerii systemata, distributa- | rum, ad-

junctis eum nominibus, rum natalium locorum rotationibus; ex Regno | Animalia: nitidissima et plane egregia copia | Concharum, | Univalvum, Bivalvum, Zoophytarum, Animalium, aliarumque rerum ad animalia | pertinentium, in quibus: Caput Medosæ, eximii Spondyli Gæderopi, Ostrea | Malleus et Ephippia, Mytilus Crista galli, Nautili, Ammirales Summi, Arau- | siaci, Voluta Signifer Arausionis, Bulla Physis, Bolla Volva, Trochi Perspectivi, Turbines Scalares, Clathri et Uva, Lithophyta Zoophyta, | aliaque animalia, ex Regno Vegetabili: | Phytophylacium | Quod conservatur in armario ex ligno Magahonensi elegantissime constructo, | Xylophylacium sive Lignorum grandis acervus, Herbæ, et alia huc | pertinentia, ex Regno Fossili, | exquisita omnibusque numeris absoluta collectio | Terrarum, Lapidum, Minerarum, Semi-Metallorum, Metallorum et Corporum | Concretorum, | in quibus præcipue eminent pulcherrimus | Adamas Rutilus Politus, | Adamtes complures alii, Rubini, Sapphiri, Topazii, Smaragdi, Chrysolithi, | Granati, Achatæ Orientales, Carneoli, Calcedonii, Onyces, Sardonyces, | Oculus Mundi, Oculus Cati, Turmalini, Chelidonii Mineræ, Jaspides, cum Rudis sive Malachites Spurious ingens, tum politus | Heliotropius, | unus omnium plane singularis, et | Gemmæ Multæ Aliæ, | Sua quæque excellentia laudabiles. | Glebæ Auri Et Argenti, | numero et pondere insignes. | Ferri, Cupri, Plumbi, Stanni Mineræ, summi pretii et excellentiæ | Petrefacta, Et Calculi Animalium | singulari elegantia et eximia varietate pretiosi, quales sunt: Margaritæ, Lapides Bezoardici Orientales, di Coromandel et Occidentales, Lapides de Goa, quorum | 48 Lapidibus copulata catena, Lapides Hystricini, sive Pedra del Porco ex | Malacca, quorum plures aureis catenis ornati. | Tandam | Duo Elebantis Structuræ Armaria. | Navigium accurate ad artis nauticæ regulas fabricatum. | Aliquot Instrumenta Physica, Optica, Mathematica, aliæque Res Exquisit. | Omnia quæ multa manu, plurimisque sumtibus ætatem collegit, reliquit | C.C.E. d'Engelbronner. | Rei fossilis cultor acerrimus. | Publica sub hasta distrahent: | [Next 4 lines in two columns separated by a vertical rule:] P. Posthumus, | G. De Vos, | J. van Dienst, | J. Ristenpatt, | [vertical rule] | G. Steenhoff, | G. van Bleyenburgh, | J. in den Berken junior et | P.J. Staedel. | Prox-enmæ, Amstelodami die 4 Decembris cioioccciv, I et 3 Decembr: | omnia cui videnda patebunt.

[DUTCH TITLE READS:]

Catalogus | van een alom beroemd, geëxtendeerd,

zeen ryk, allerkostbaarst, door gekeel | Europa, Oost- en West-Indiën en andere afgelegene Landen by een verzamelt | Cabinet | van | Natuurlyke Historie. | In juiste orde gerangschikt naar de Systemata van Linneus, Wallerius en | andere beroemde Geleerde, met byvoeging der Naamen en Geboorteplaatsen. | Bestaande: nit het Dieren-Ryk, | in een keurige, en nechte Verzameling van | Hoorns, Schelpen en Zeegewassen, | Opgezette Dieren en Dierlyke Zaaken. | Waaronder uitmuntend Medusahoofd, Lazarusklappen, Poolsche Hamer, Poolscha | Zadels en Haanekammen. Nautilussen, gaave Admiraalen, Vice-, Oranje en- | Opper-Admiraalen, Oranje Vlaghoorn, Coromandelsche Eijesen, Wever- | spoel, Wenteltrappen en Perspectiefhoorns, Zeeplanten en andere | Dieren. Uit he Planten-Ryk: | Diverse Verzamelingen zo van verschillende Simplicia, beaard wordende in een extra fraaie | Mahognyhout Simplicia-Kast, | Als van Uitlandsche Houten, Planten en andete vreemde Oswassen, uit het | Steenen-Ryk: | Keurige en volledige Verzamelingen van Aardens, Steenen, Marmets Albasten, | Asbesten, Bergwol, enz. | waaronder uitmuntend kostbaare | Bril-lant, | Diamanten, Robynen, Sapphieren, Smaragden, Topaazen, Granaaten, Agaaten, | Cornalynen, Onyxsteenen, Werelds- en Kat-Oogen, Turmalnen, Zwaiuw- | steenen, Goudsteenen, extra groote Ruwe, en een ongemeen zeldzaame | gepolyste, in zyn feort eenige | Heliotroop Jaspis, | en meer andere kostbaare | Edelgesteentens. | Uitnemend groote, fraaije, zuivere, zeldraame, ryke | Gould en Silber-Ertzen. | Yzer, Kooper, Looode en Tin-Mynen, van byzondere waard en zeldzaamheid, uitsteekend faaje | Versteeningen en Dierlyke Kalksteenen; | Waaronder extra zuivere Paerlen, Bezoar, en Een Ketting van 48 stoks de Goa- | steenen, allerkostbaarste in Goud gevatte Zwynsteenen of Pedra del Porco, | ten laatsten | Twee Cierlyke Konstcabinetten. | Proportioneel Oost-Indisch Fregat-Scheepje. | Eenige Physische, Optische, Mathematische en andere Instrumenten, | Rariteiten en Zeldzaamheden. | Alles proper geconserveerd, en van de maeste waarde, gedaurande moer dan | veertig Jaaren, met veele moeite en kosten, eenig en alleen verzameld en | Nagelaaten door wylen den Heer | C.C.E. d'Engelbronner, | Al hetwelk Verkogt zal worden op Dingsdag de 4 December 1804, | en volgende Dagen, te Amsterdam ten Huize van C.D. Meerhoff, Caseleyn in het Oudezds Heeren Logement, voormiddags ten 10 | Uuren. Ten overstaan van de Makelaars. | [Next 4

lines in two columns separated by a vertical rule:] P. Postumus, | G. de Vos, | J. van Diest, | J. Ristenpatt, | [vertical rule] | G. Steenhoff, | G. van Blyenburgh, | J. in den Berken junior en | P.J. Staedel. | By wien deze Catalogus (à vy en een halve Stuiv, voor den Armen) re bekomen | zya. Saturdag en Maandag 's Voorwiddag van tien tot half drie Unten voos | een ieder te zien.

8°: π^4 A-T⁴; 80 ℓ .; VII, [1], 151, [1] p. (Page 106 misnumbered 406). In Dutch and Latin; text printed in parallel columns. Publisher and place from colphon, p. [152].

VERY RARE. Auction sale catalog for an event that occurred on December 4, 1804. Listed in the catalog were shells from the seven seas, various earths, stones, minerals, semi-metals, metals, precious and semiprecious stones, including diamond, ruby, sapphire, topaz, emerald, garnet, oriental agate, carnelian, chalcedony, onyx, sardonyx, tourmaline, jasper, various fossils, examples of native elements, stones derived from animals, Bezoar stones, stuffed animals, and a few scientific instruments used in physics, optics and mathematics.

REFERENCES: BL: [no copy listed]. • Engel, *Dutch Zoological Cabinets*, 1986: 81.

ENGESTRÖM, Gustav von. (BORN: Lund, Sweden, 1 August 1738; DIED: Upsala, Sweden, 12 August 1813) *Swedish mining expert.*

Engström was warden of the mint and an advisor to the Bergcollegium. He held membership in the Swedish Academy of Sciences in Stockholm.

REFERENCES: *Biographiskt Lexicon*. • Poggendorff: 1, col. 670. • SBA: Scandinavian Biographical Archive: B-065, 008-009. • Stouffs, *Inventaire des Papiers du Didot*, 1963. • *Svenskt Biografiskt Lexikon*: 13, 626-?? . • WBI.

1532. — Swedish, 1774.

Tal om mineralogiens hinder och framsteg i senare Åren; hållet för Kongl. Vetenskaps Akademien, vid Praesidii nedläggande. Stockholm, 1774.

4°: 26 p.

RARE. Reviews the progress of mineralogy for the year 1773-1774.

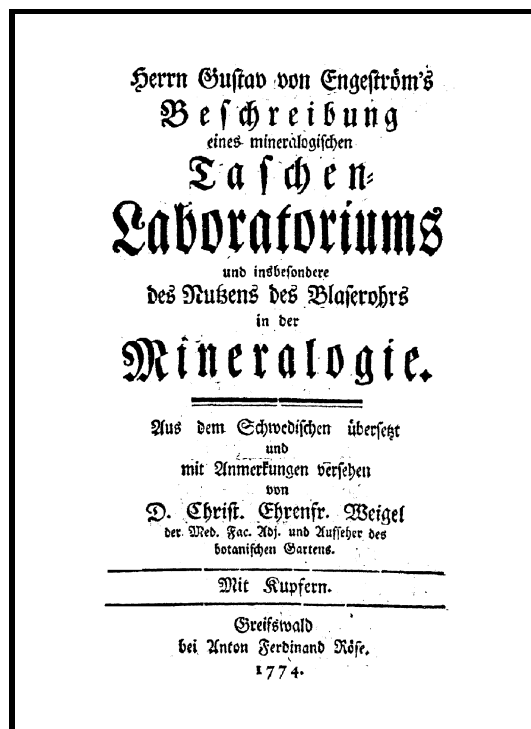
REFERENCES: BL: [965.k.6.(5.)]. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 1.

1533. — German, 1774 [Translation, First edition].

Herrn Gustav von Engeström's | Beschreibung | eines mineralogischen | Taschen= | Laboratoriums | und insbesondere | des Nutzens des Blaserohrs | in der | Mineralogie. | [double rule] | Aus dem Schwedischen übersetzt | und | mit Anmerkungen versehen | von | D. Christ. Ehrenfr. Weigel | [...2 lines of titles and memberships...] | [rule] | Mit Kupfern. | [rule] | Greifswald | bei Anton Ferdinand Röse. | 1774.

8°: ⁽⁵⁾A-E⁸ F²; 47 ℓ .; [10], [1]-83, [1] p., 2 folding plates (blowpipes). PAGE SIZE: 156 x 88 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Vorrede."—signed C.E. Weigel.; [6 pgs], "Vorrede | des |



BESCHREIBUNG, 1774

Schwedischen Uebersetzers."; [1 pg], Blank.; [1]-83, Text.; [1 pg], Blank.; [At end], 2 folding plates.

SCARCE. Translation by CHRISTIAN EHRENFRIED WEIGEL. The basis of this work were lectures Engström delivered in London in 1765. It first appeared in print as an appendix to *An Essay Towards a System of Mineralogy* (1st ed., London, 1770), for which Engström had acted as the English translator. It describes Engström's pocket laboratory, blowpipe and procedures used in the analysis of minerals.

Christian Ehrenfried Weigel. (BORN: Staslund, Germany, 24 May 1748; DIED: Greifswald, Germany, 8 August 1831) *German physician & chemist.* Weigel had his early education at private school in Stralsund. In 1764 he matriculated at the University of Greifswald. From 1775 onwards, Weigel was professor of botany and chemistry at the University of Greifswald. He was the inventor of the counter current cooler (Liebig cooler). Weigel wrote and translated mostly on chemical subjects.

REFERENCES: BL: [973.b.10.(1.)]. • NUC. (Weigel) ADB: 41, 464. • Anslemio, O., "Nachrichten von früherer Lehrern der Chemie and er Universität Greifswald," *Mitteilungen des Naturwissenschaftlichen Vereins für Neu-Vorpommern und Rugen in Greifswald*, 38 (1906), 117-30. • DBA: I 1341, 359-377; 1341, 383-389. • DBE: 10, 385-6. • Drugulin, *Sechstausend Portraits*, 1863: no. 5821. • DSB: 14, 224-5 [by K. Hufbauer]. • *Neuer Nekrolog der Deutschen*: 9 (1831), 699-705 [obituary]. • Partington, *History of Chemistry*, 1961-70: 3, 594-5. • Poggendorff: 2, col. 1283. • Valentin, J., "Die Entwicklung der pharmazeutischen Chemie an der Ernst Moritz Arndt-Universität in Greifswald," in: *Festschrift zur 500-Jahrfeier der Universität Greifswald*, 2 (Greifswald, 1956), 472-5. • WBI. • *World Who's Who in Science*: 1772.

1534. German transl., 2nd edition, 1782: Beschreibung eines

ENGLISH

mineralogischen Taschen-Laboratoriums und insbesondere des Nutzens des Blaserohrs in der Mineralogie. Aus dem Schwedischen Übersetzt von C.E. Weigel. Zweite vermehrte Ausgabe. Greifswald, A.F. Röse, 1782.

8°: [8], [1]-184 p., 2 folding plates (blowpipes).

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede"—signed C.E. Weigel, December 1781.; [4 pgs], "Vorrede zur Schwedischen Uebersetzung."—signed And. Jah. Retzius.; [1]-104, Text of Engeström's treatise on the blowpipe.; [105], "Herrn Prof. und Ritter Torbern Bergman Abhandlung von der Probirung der Erze auf dem Nassen Wege, aus dem Lateinischen übersetzt."; [106], Blank.; [107]-184, Text of Bergman's analysis of minerals in the wet way.; [At end], 2 folding plates.

SCARCE. Translation by CHRISTIAN EHRENFRIED WEIGEL. Greatly enlarged second edition of the German translation first published in Greifswald in 1774.

REFERENCES: BL: [no copy listed]. • *Freilich Sale Catalog*: no. 171. • LKG: XI 10. • Smeaton, *Portable Chemical Laboratories*, 1966: 13 (1966), 84-91.

1535. — French, 1796.

Guide | Du | Voyageur | Aux Carrieres Et Mines | De Svede, | A L'Usage | Des Etranger Curieux, | Des Mineraux Et Mineralogues, | Par | Gustave d'Engeström, | Conseiller Dés Mines. | [ornament] | [double rule] | Stockholm, | Chez Joh. A. Carlsbohm, Imprimeur, 1796.

8°: [1]-110, [8], [2] p., one folding map (620 x 490 mm.; engraved by G.F. Linnerhjelm).

SCARCE. An early topographical mineralogy of Sweden. Intended for tourists, collectors, amateurs and scientists, the *Guide's* seven tours give detailed information of geological formations, quarries, mineral deposits, mines, specimen localities, and medicinal baths one finds travelling town to town in the Swedish kingdom. The final tour covers Lapland and Finland (at the time Swedish possessions). One index references mines, forges, smelting operations, towns, cities and interesting formations. The second lists mineral species.

REFERENCES: BL: [7106.f.17.(1.)]. • LKG: XIV 810. • NUC. • Smith, *Regional Mineralogies of the World*, 1995: 1129. • Spencer, *Catalogue of Topographical Mineralogies*, 1948: 305.

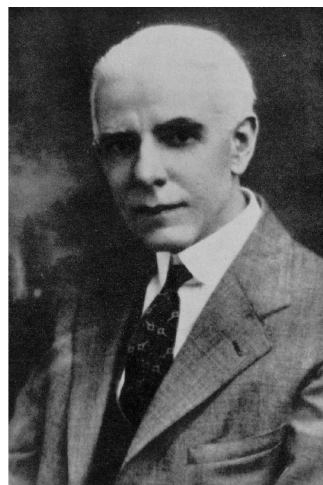
1536. — Swedish, 1773.

Beskrifning | På et | Mineralogiskt | Fick-Laboratorium | Och i synnerhet | Nyttan af Blåsröret | Uti | Mineralogien, | Af | Gustaf von Engeström | [rule] | Öfwersatt från Engelskan. | [rule] | Stockholm, | På Direct. Carl G. Ulfs bekostnad, | Och finnes i desz Boklåda på St. Nygatan huset n:o 130 | 1773.

8°: A-C⁸ D²; 26^l.; [4], [5]-50, [2] p., 2 plates, vignettes on p. 5 and 50.

CONTENTS: [1-2], Title page, verso blank.; [3-4], Foreword signed And. Jah. Retzius.; [5]-50, Text.; [2 pgs], "Stockholm | Tryckt hos Lars Kumblin. | År 1773."

RARE. Swedish translation by ANDERS JAHAN RETZIUS of the text of the blow-pipe section that first appeared in the English translation of CRONSTEDT'S *An Essay Towards a System of Mineralogy* (1st ed., London, 1770). [Entry by Johan Kjellman]



ENGLISH

REFERENCES: LKG: XII 40. • NUC. • SWIM.

ENGLISH, George Letchworth. (BORN: Philadelphia, Pennsylvania, U.S.A., 14 June 1864; DIED: Rochester, New York, U.S.A., 1944) *American mineralogist & mineral dealer.*

In 1881, English graduated from the Friends' Central School in Philadelphia. Having attended the 1876 Centennial Exposition in Philadelphia, he had become interested in minerals. In 1887, he opened a mineral establishment and worked as an independent mineral dealer until 1903. Due to his expertise in the mineral monazite, English was offered a position with the Natural Light and Thorium Company, where he worked from 1903 to 1913. From 1913 to 1934, he was mineralogist for Ward's Natural Science Establishment in Rochester, N.Y. For the last decade of his life, he worked as a consulting mineralogist. English held memberships in the New York Mineral Club, the Academy of Natural Sciences, Philadelphia, Rochester Academy (president, 1919-21), and the Brooklyn Institute. He discovered the minerals penfieldite, graptomite, pyroxmangite and skemmatite, and the mineral species "Englishite" is named in his honor.

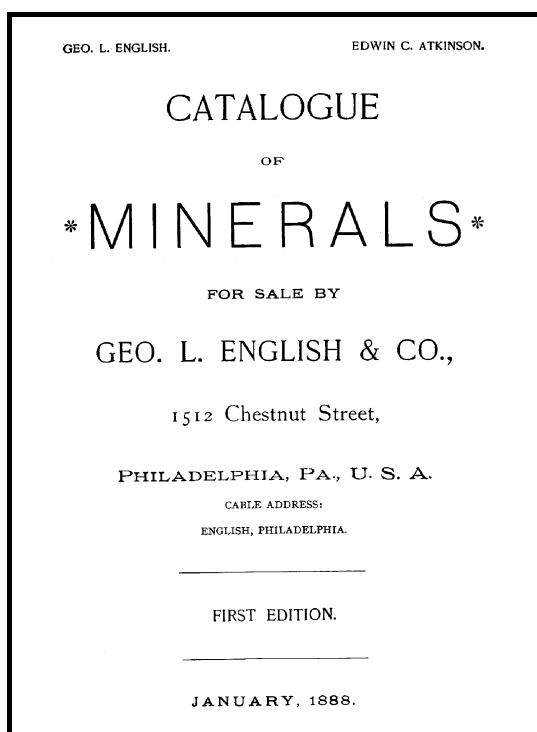
REFERENCES: ABA: I 507, 436-439. • *American Men of Science*, 6th edition (1938). • *American Mineralogist*: 30 (1945), nos. 3-4, 130-34, portrait. • *Herringshaw's National Library of American Biography*. • *Mineralogical Magazine*: 28 (1948), no. 199, 190. • Sarjeant, *Geologists*, 1980: 2, 961-2. • WBI. • *Who Was Who in America*.

1537. — English, 1888 [First edition].

Geo. L. English. [white space] Edwin C. Atkinson. | Catalogue | Of | * Minerals * | For Sale By | Geo. L. English & Co., | 1512 Chestnut Street, | Philadelphia, Pa., U.S.A. | Cable Address: | English, Philadelphia. | [rule] | First Edition. | [rule] | January, 1888.

8°: [2], [1]-24, [2] p. PAGE SIZE: 234 x 150 mm.

CONTENTS: [1 pg], Front over of printed wrap, "[inside an ornate box] Catalogue | Of | [on slant] Minerals, | Geo. L. English & Co., | 1512 Chestnut Street, | Philadelphia, Pa., U.S.A. | [rule] | First Edition. | [rule] | January, 1888."; [1 pg], "Contents."; [1-2], Title page, verso blank.; [3], References, by Permission.; [4], Blank.; [5], "Introduction."; 6-24, Text.; [1 pg], Inside back cover; [1 pg], Back cover [blank].



CATALOGUE OF MINERALS, 1888

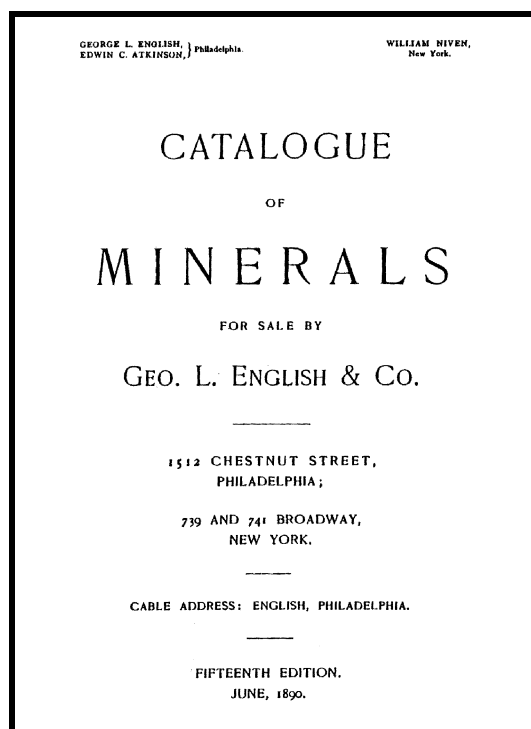
VERY SCARCE. The first catalogue issued by this famous mineral dealing firm. It covers minerals for technical and commercial purposes, systematic collections, collections illustrating blowpipe analysis, hardness, microscopic study and fusibility. Also included are price lists for cabinet specimens, and specimens for Franklin, New Jersey, Colorado, Amelia Co., Virginia, Canada, North Carolina, Arizona, New Mexico, California and Europe.

2nd to 14th Editions: Descriptions of the subsequent separate editions of the *Catalogues* are listed below. However, the second through the fourteenth edition apparently were not published separately. Instead, between 1888 and 1890, English paid for their inclusion into issues of the rare mineralogical periodical, *The Exchangers Monthly*. They were published at the end of the issue, and sometimes, these lists would account for more than half of the total pages of each issue. Every catalog was introduced with a title similar to, "Geo. L. English & Co.'s Catalogue." No doubt this financial boon to the magazine helped the editor Arthur Chamberlain to keep the venture alive.

George L. English & Co. *American mineral dealing firm.* Founded in 1887 in Philadelphia by George English in partnership with a fellow Philadelphia mineral collector Edwin C. Atkinson. They had their shop at 1512 Chestnut Street, issuing their first catalog in 1888. By 1890, Geo. English & Co. had merged with the New York mineral dealer William Niven [1850-1937] to form perhaps the greatest mineral dealing firm of the time. The New York store address was 739 and 741 Broadway, however, by

1891, they had moved a few numbers down and had their shop at 733 and 735 Broadway. In 1892, English assumed sole control of the business, moving to new premises located at 64th East 12th Street in New York about 1893. Geo. English & Co. appears to have remained located at this last address until the stock was sold to Ward's Natural History Establishment of Rochester, New York in 1903. English appears to have continued actively dealing minerals, however, in 1905 he is listed as a dealer in minerals at 3 and 5 West 18th Street, New York. As a side note, Atkinson is listed in Philadelphia with a mineral collection as late as 1905.

REFERENCES: NUC. (George L. English & Co) Bentley, R.E., "Historical Record: George English," *Mineralogical Record*, 10 (1979), 243-5, illus. • *Naturalists' Directory*: 1890-1905.



CATALOGUE OF MINERALS, 1890

1538. 15th edition, 1890: [On the upper left hand side of title page, braced on the right hand side by a "}:"] George L. English | Edwin C. Atkinson, | } Philadelphia | [On the upper right hand side of title page:] William Niven, | New York. | Catalogue | of | Minerals | For Sale By | Geo. L. English & Co. | [rule] | 1512 Chestnut Street, | Philadelphia; | 739 And 741 Broadway, | New York. | [rule] | Cable Address: English, Philadelphia. | [rule] | Fifteenth Edition. | June, 1890.

8°; [1]-100 p., frontispiece (xl drawings of Beryllonite from Stoneham, Maine), 57 text illus. PAGE SIZE: 230 x 147 mm.

CONTENTS: [1-2], Title page, verso "Copyright, 1890, | By | Geo. L. English & Co."; [3], "Introduction."; 4, "References by Permission."; [5], "Location of Our Stores. | ..."; 6-7, "Mineralogical Sundries."; 8-9, "Books on Mineralogy."; 10, "Goniometers."; 11-13, "...Systematic Collections."; 14-16, "Minerals for Blowpipe Analysis."; 17, "Microscopic Mounts of Minerals."; 18-58, Long

ENTZELT

descriptions of new minerals and/or occurrences.; 59-89, "Classified List of Mineral Species."; 90-100, "Index."

VERY SCARCE. From the Introduction: "Mineralogy has kept pace with allied sciences in the advances of the past ten or twenty years. The very great increase in the demand for mineral specimens, and the general centering of the business in the United States upon our house, have created a demand for a more elaborate catalogue of our stock, which we have endeavored in our present issue to satisfy."

"It is our earnest desire to have an unsullied reputation for integrity and justice, as we believe that upon no other basis can a permanent business be built up. The attention of parties who do not know of our standing is respectfully called to the list (on the following page) of distinguished mineralogists who kindly permit us to use their names for reference."

"The liberal support given us in the past has encouraged us to very materially increase our stock as well as our facilities for promptly filling the large orders entrusted to us. At the present time we have no hesitation in claiming that our stock is the largest, finest, most complete in species, and in every way the best, in the United States. The recent consolidation of the houses of George L. English & Co., of Philadelphia, and William Niven, of New York, into a new firm to be known as George L. English & Co., is already being recognized as a move to place the mineral business in the United States on the highest plane. It will be the constant aim of the new firm to keep *no poor material*, and while our efforts to secure the choicest of everything often compel us to buy at much higher prices than are commonly asked, an examination of our catalogue will show that our prices are almost invariably as low as or lower than those of other dealers, while the superiority of our material cannot fail to be noticed. This is because we study carefully the needs of all classes of our customers, confine our business wholly to mineralogy, and secure our material direct, personally, or by experienced assistants, visiting the localities and purchasing desirable material in large quantities."

REFERENCES: NUC: **160**, 329 [NE 0130561].

1539. 15th edition, supplement, 1891: George L. English Edwin C. Atkinson William Niven | Supplement A | To | Catalogue Of Minerals | For Sale By | Geo. L. English & Co. | [rule] | 733 and 735 Broadway, | New York. | [rule] | Cable Address: Quatorze, New York. | [rule] | September, 1891.

8°: [1]-20 p., illus. In paper wraps. PAGE SIZE: 228 x 145 mm

CONTENTS: [1], Title page.; [2], "Copyright 1891, | By | Geo. L. English & Co."; [3]-19, Text.; 20, "New Mineral Species."

VERY SCARCE. The first supplement to the 15th edition of the author's *Catalogue of Minerals* (Philadelphia & New York, 1890). It gives a list of new species, with republished notes on various old species, especially of American source.

REFERENCES: *American Journal of Science*: 3rd Series, **42** (1891), 438. • NUC: **160**, 329 [NE 0130561].

1540. 16th edition, 1894: Catalogue | Of | Minerals | And | Mineralogical Supplies. | [rule] | Geo. L. English & Co., | 64 East Twelfth Street, | New York City. | [ornate rule] | Cable Address: Quatorze, NewYork. | [rule] | Copyright, 1894, | By Geo. L. English & Co. | [rule] | Sixteenth Edition. | June, 1894.

8°: [1]-124 p., frontispiece, illus. In paper wraps. PAGE SIZE: 230 x 144 mm.

CONTENTS: [1], Title page.; [2], "Contents."; [3], "Preface."; 4, "References by Permission."; 5-123, Text.; 124, "List Of Elements."

VERY SCARCE. This catalogue is more than an illustrated price list of minerals. The classified list, with its alphabetical index, presents in classified order the names of all the minerals and their varieties described in EDWARD

S. DANA's *System of Mineralogy* (New York, 1892). Included are notes about the chemical formula, hardness and specific gravity for each mineral named.

REFERENCES: NUC.

1541. 16th edition, price list, 1894: Price-Lists | Of | Minerals | And | Mineralogical Supplies, | For Sale By | Geo. L. English & Co., | 64 East Twelfth Street, | New York. | [ornament] | Cable Address: Quatorze, NewYork. | [rule] | Copyright, 1894, | By Geo. L. English & Co. | [short rule] | Sixteenth Edition. | June, 1894.

8°: [1]-44 p., 57 text illus. Printed wraps. PAGE SIZE: 234 x 150 mm.

CONTENTS: [1], Title page.; [2], "Contents."; [3], "Preface."; 4, "References by Permission."; 5-44, Text.

VERY SCARCE. A separately published price list to the 16th edition of the author's *Catalogue of Minerals* (Philadelphia, 1894). "Every one of the following pages contains fresh matter, the illustrations are new throughout, and a complete revision of all our systematic collections has been made, bringing them up to date in every way."—*Preface*.

REFERENCES: *American Journal of Science*: 3rd Series, **48** (1894), 511. • NUC: **160**, 329 [NE 0130560 & NE 0130562].

1542. — English, 1934.

Getting acquainted with minerals, by George Letchworth English; with 258 illustrations. First edition. New York, McGraw-Hill, [c1934].

8°: xi, 324 p. incl. front., illus., diagsr.

VERY SCARCE. "Special emphasis is laid on the occurrence of minerals in the United States."—*Preface*.

Another issue: *Getting acquainted with minerals by George Letchworth English, with 258 illustrations*. Rochester, N.Y., Mineralogical publishing company [1934]. xi, 324 p. incl. front., illus., diagsr.

Second edition, 1954: *Getting acquainted with minerals by George Letchworth English and David E. Jensen*. Revised edition. New York, McGraw-Hill [1958]. 362 p., illus.

1543. — English, 1939.

Descriptive list of the new minerals, 1892-1938, containing all new mineral names not mentioned in Dana's *System of mineralogy*, sixth edition, 1892. Compiled by George Letchworth English ... First edition. New York, London, McGraw-Hill Book Company, inc., 1939.

8°: vii, 258 p. VERY SCARCE.

ENTZELT, Christoph. (BORN: Saalfeld, Thüringen, Germany, 1517; DIED: 15 March 1586) *German theologian & geologist*.

Entzelt (or the Latin Encelius) matriculated at the University of Wittenberg in 1532. He became a disciple of religious reformer Martin Luther [1483-1546] and became in 1539 church rector in Tangermünde in the state of Brandenburg. Later, in 1558, he became pastor in Osterburg.

REFERENCES: ADB: **6**, 155. • DBA: I 286, 160-161; II 332, 307. • Ferguson, *Bibliotheca Chemica*, 1906: **1**, 240. • Hübner, *Bibl. Geneal.*: **20**, 592. • Jöcher, *Gelehrten-Lexikon*, 1750-51: **2**, col. 357. • Partington, *History of Chemistry*, 1961-70: **2**, 64-5. • Poggendorff: **1**, cols. 671-2. • WBI. • *World Who's Who in Science*: 526.

1544. — Latin, 1551 [First edition].

De Re | Metalli | ca, Hoc Est, De Origine, | Varietate, & Natura Corporum | Metallicorum,



ENTZELT, 1551

ENTZELT, 1557

Lapidum, Gemmarum, atq; alia- | rum, quæ ex
fodinis eruuntur, rerum, ad | Medicinæ usum
deseruientium, | Libri III. | Autore Christophoro
| Encelio Salueldensi. | Cum priuilegio Imper. |
[ornament] | Franc. Apud Chr. Egenolphum.

8°: α^8 A-R⁸; 144ℓ.; [16], 1-271, [1] p., 5 woodcuts,
wood cut ornament on the title page. Folding tables are
paginated into the text and occur at pages 93, 98 and
102. Numerous misprints in pagination throughout the
text. PAGE SIZE: 154 x 98 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs],
Philip Melanchthon's prefatory letter, dated 19 August
1551.; [11 pgs], "Index."; [1 pg], Blank.; 1-271, Text.; [1 pg],
Blank.

RARE. This is an important work in the study of
systematic mineralogy which complements the writings
of Agricola and Ercker. The author acknowledges a
debt to Agricola, but since the work is focused on
the medical uses of metals, stones minerals and gems,
he cites Pliny, Dioscorides and Serapion more often.
He repeats the ancient and medieval traditions and
beliefs with regard to gems, but sometimes regards
the mystical powers as suspicious. Throughout many
German names are provided together with an index
and mention is made of some German mines. Entzelt
is critical of Albertus Magnus for listening to much
to the chemists and censures him for belief in magic,
although he often ascribes powers to stones that are
not far of magical. Entzelt offers recipes for mixing
ink and for making shoe-black. He discusses crystals
used in spyglasses, the superpowers of stones found
in animals, German mining regions, fossils, gemstones and
amber. Throughout, Entzelt has much to say on the
classification and hierarchy of minerals and metals, and
illustrates his theories on numerous schematic charts
and on the three folding leaves that are rarely found
intact. The text is divided into three sections: metals
(pp. 1-72), semi-metals (pp. 73-155) and stones, earths
and gems (pp. 156-271).

Included at the beginning is a strong letter of

commendation from Philip Melanchthon [1497-1560] to
Egenolph, the printer at Frankfurt, dated 19 August
1551, recommending the book to be printed because it
contains material found nowhere else. Since the title
page is undated, this edition is ascribed to publication
in that year. In comparing multiple copies of the 1557
printing to this edition, it has been determined that
the text is from the same sheets in both edition, with
the only differences being on the title page and on
the folding table inserted at page 93. On this table
in the 1551 edition, line 6 from bottom ends "...quod
Dioscorides uo-" while the same line in the 1557 edition
ends "...quod Dioscorides."

English transl., 1943: [On cover:] De Re | Metallica |
de | Christophori | Encelii Salueldensis | Anno Domini
1557. [on first page after cover:] Translated for | Ohio
Ferro-Alloys Corp. | Canton, Ohio | By | Miss Nellie E.
Lutz, | Ph.B. | McKinley High School | Canton, Ohio |
Edited By | Lloyd M. Swan, B.S.-M.A. | McKinley High
School | Canton, Ohio. | Copyright 1943 By | Ohio
Ferro-Alloys Corporation | Canton, Ohio.

8°: [2], [1]-95, [1] p. Bound in stiff cardboard that
has been manufactured to look like ancient vellum.

[Cover] First part of the title.; [2 pgs], Title
page continued, verso blank.; [3-4], Facsimile of Philip
Melanchthon's prefatory letter to the printer Egenolphum
recommending this book be printed, dated 19 August 1551.;
5-95, Text of translation.; [1 pg], Blank.

Scarce. Translation by Nellie E. Lutz and edited by
Lloyd M. Swann of the first Book of *De Re Metallica* (2nd
ed., 1557).

REFERENCES: Beekman, *Systematische Mineralogie*,
1906: 24. • Benzing, J., "Christian Egenolf zu Strassburg
und seine Drucke (1528-1530)," *Das Antiquariat*, 10 (1954),
no. 285. • BL: [987.b.23.]. • Duveen, *Bibliotheca Alchemica
et Chemica*, 1965: p. 192 ["An interesting and rare work
on metallurgy and alchemy."]. • Ferguson, *Bibliotheca
Chemica*, 1906: 1, 240. • Hoover Collection: no. 279. • NUC:
160, 587-8 [NE 0138717]. • Partington, *History of Chemistry*,
1961-70: 2, 64-5. • Roller & Goodman, *Catalogue*, 1976: 1,
365. • Sinkankas, *Gemology Bibliography*, 1993: no. 1904.
• Thorndike, *History of Magic*, 1923-58: 6, 308-10. • Ward
& Carozzi, *Geology Emerging*, 1984: no. 751. • Wellcome
Catalog (Books): 1, no. 2009.

1545. 2nd edition, 1557: De Re | Metall- | ca, hoc est, de
Origine, | Varietate, & Natura Corporum | Metallicorum,
Lapidum, Gemmarum, Atq; alia- | rum, quæ ex fodinis
eruuntur, rerum, ad | Medicinæ usum deseruientium. |
Libri III. | Autore | Christophoro | Encelio Salueldensi.
| Cum Priuilegio Imp. | [ornament] | Franc. Apud Hæred.
Chri- | stiani Egenolphii. | [rule] | M. D. LVII.

8°: α^8 A-R⁸; 144ℓ.; [16], 1-92, 94-97, 99-101, 103-271,
[1] p., 5 woodcuts, wood cut ornament on the title page.
Folding tables are paginated into the text and occur at
pages 93, 98 and 102 which accounts for the odd pagination.
Numerous misprints in paging throughout the text. PAGE
SIZE: 155 x 100 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs],
Philip Melanchthon's prefatory letter to the printer
Egenolphum recommending this book be printed, dated
19 August 1551.; [11 pgs], "Index."; [1 pg], Blank.; 1-271,
Text.; [1 pg], Blank.

VERY SCARCE. The text appears to be identical to the
first edition of 1551 [see previous entry].

REFERENCES: BL: [726.b.1.(1.)]. • Ferguson, *Biblio-
theca Chemica*, 1906: 1, 240. • Freilich Sale Catalog: no. 172. •
NUC: 160, 587-8 [NE 0138718]. • Roller & Goodman, *Cat-
alogue*, 1976: 1, 365. • Sinkankas, *Gemology Bibliography*,
1993: no. 1905. • Thorndike, *History of Magic*, 1923-58: 6,
308-10. • Wellcome Catalog (Books): 1, no. 2010.

ERCKER

Corpus juris & systema rerum metallicarum, oder: Neu-verfasstes Berg-Buch, bestehend aus allerhand, so alten als neuern collectaneis von Bergwercks-Sachen, und zwar I. Christoph. Encelii Tractat von metallischen Dingen ... (Frankfurt am Mayn, 1698).

See: *Corpus Juris & Systema*.

1546. — English, 1943 [English transl.].

[On cover:] De Re | Metallica | de | Christophori | Encelii Salveldensis | Anno Domini 1557. [on first page after cover:] Translated for | Ohio Ferro-Alloys Corp. | Canton, Ohio | By | Miss Nellie E. Lutz, | Ph.B. | McKinley High School | Canton, Ohio | Edited By | Lloyd M. Swan, B.S.-M.A. | McKinley High School | Canton, Ohio. | Copyright 1943 By | Ohio Ferro-Alloys Corporation | Canton, Ohio.

8°: [2], [1]-95, [1] p. Bound in stiff cardboard that has been manufactured to look like ancient vellum. PAGE SIZE: 155 x 100 mm.

CONTENTS: [Cover] First part of the title.; [2 pgs], Title page continued, verso blank.; [3-4], Facsimile of Philip Melancthon's prefatory letter to the printer Egenolphum recommending this book be printed, dated 19 August 1551.; 5-95, Text of translation.; [1 pg], Blank.

VERY SCARCE. Translation by Nellie E. Lutz and edited by Lloyd M. Swan of the first Liber of *De Re Metallica* (2nd ed., 1557).

REFERENCES: NUC: 160, 587-8 [NE 0138719-20].

ERASTUS, Thomas. (BORN: Auggenen, near Badenweiler, Switzerland??, 1523; DIED: Basel, Switzerland, 1 January 1583) *Swiss physician*.

Erast was a professor of medicine at the Universities at Heidelberg and Basel.

REFERENCES: ADB. • *Encyclopaedia Britannica*, 11th edition. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, col. 673.

1547. — Latin, 1572.

Disputationum de nova Philippi Paracelsi pars altera: in qua philosophiae Paracelsicae principia elementa explorantur. (Explicatio quaestionis famosae utrum ex metallis ignobilibus aurum verum & naturali arte conflare possit. – Epistola de natura, materia, ortu atque usu lapidis sabulosi qui in Palatinatu ad Rhenum reperitur.) Adjectus est index copiosus. Basileae, [Apud Petrum Pernam], M.D.LXXII.

4°: [16], 267, [18] p., title vignette.

VERY SCARCE. Printed as part 2 of a four part series, which is usually bound together in two volumes. The treatise, *Epistola de natura*, has its own title page and occupies pages 125-143.

REFERENCES: BL: [956.i.3.(2-4.)]. • LKG: XIV 266. • Wellcome Catalog (Books): 1, no. 2057.

ERCKER (Erckner, Erckel), Lazuras. (BORN: Annaberg, Saxony, c1530; DIED: Prague, Bohemia?, 1594) *German mining expert*.

From 1547 to 1548, Ercker was educated at Wittenberg University. In 1554, he obtained, through his wife's relatives, a post as assayer from the Elector

Augustus II at Dresden. From there on he moved through a succession of positions in mining, metallurgy and at the mint. After 1558 he moved to Prague where he wrote his best known book, *Die Beschreibung allfürnemisten mineralischen Ertz* (Prague, 1574), which brought him the attention of Emperor Maximilian. Ercker was appointed Courier of Mining and a clerk of the Supreme Court of Bohemia. The next Emperor, Rudolf II, made him Chief Inspector of Mines and ennobled him in 1586 with the title 'von Schreckenfels.'

REFERENCES: ADB: 6, 214. • Armstrong, E.V. & H.S. Lukens, "Lazarus Ercker and his Proberbuch," *Journal of Chemical Education*, 15 (1939), 553-62. • Beierlein, P.R., *Lazarus Ercker*. Berlin, Akademie Verlag, 1955. [1]-143 p., illus. • *Biographical Dictionary of the History of Technology*: 242. • DBA: I 289, 224. • DSB: 4, 393-4 [by W. Hubicki]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 242-5. • *ISIS*, 1913-65: 1, 386. • Lambrecht & Quenstedt, *Catalogus*, 1938: 129. • NDB: 4, 567-8 [by P.R. Beierlein]. • Partington, *History of Chemistry*, 1961-70: 2, 104-7. • Sarjeant, *Geologists*, 1980: 2, 963 & Suppl. 1 (1985), 1, 408. • WBI. • *World Who's Who in Science*: 527. • Wrany, *Geschichte der Chemie in Böhmen*, 1902: 91. • Wrany, *Pflege der Mineralogie in Böhmen*, 1898: 16-20.



BESCHREIBUNG, 1574

1548. — German, 1574 [First edition].

[In black:] Beschreibung: | [in red:] Allerfürnemisten | [in black:] Mineralischen Ertzt vnnnd Berck= | [in red:] wercksarten/ wie Dieselbigen/ vnnnd eine jede in sonder= | heit/ jrer natur vnnnd eigenschafft nach/ auff alle metaln Probirt/ vnd im | kleinen fewer sollen versucht werden/ mit erklerung etlicher fürnehmen nützlichen | [in

black:] Schmelzwerken un grossen fewer/ auch
 schaidung Goldt/ Silber/ vnnd andere Me=
 talln/ Sampt einem bericht des Kupffer saigerns/
 Messing brennens/ vnnd Salpeter | siedens/ auch
 aller saltzigen Minerischen proben/ vnd was denen
 allen anhen= | [in red:] gig in fünff Bucherverfast/
 Dergleichen zuuorn niemals in Druck kom=
 men. Allen liebhabern der fewer künste/ jungen
 Probirern/ | vnnd Berckleuten zu nutz/ mit
 schönen Figuren | [in black:] vñ abriß der
 Instrument/ trewlich vñ | fleissig an Tag geben.
 | Durch/ | [in red:] Lazarus Erckern. | [in black,
 vingette] | [in red:] Mit Kôm: Kay: Ma: Gnad vnd
 Priuilegio.

2°: ★⁴ A-Z⁴ Aa-Mm⁴ Nn⁵; 149ℓ.; [4], I-CXXXX,
 [5]ℓ., 33 text woodcut illus. Title page in red and black,
 with woodcut vignette. Text numbered on recto only.
 COLOPHON: "Gedruckt zu Prag inn der Alten Stadt
 durch Georgen Schwartz, 1574." PAGE SIZE: 290 x
 190 mm.

CONTENTS: ★1r, Title page.; ★1v, "Avtoris Proso- |
 ..."; ★2r-★4v, Forword.; I-CXXXX (=A1r-Mm4v), Text.;
 Nn1r-Nn4v, "Register."; Nn5r-Nn5v, "Verzeichnis der
 Errata."

VERY RARE. Together with AGRICOLA's *De Re Metallica* (1st ed., Basel, 1556), Ercker's treatise is the most authoritative and practical work on 16th century metallurgy and assaying. He provides a systematic review of methods of testing alloys and minerals and of obtaining and refining various metals. Also described are procedures for manufacturing acids, salts and other chemical compounds, including saltpeter and vitriol. Apparatus and laboratory equipment used in metallurgy and assaying as well as detailed accounts of laboratory procedures, all of which had been used by Ercker in his everyday work as inspector of mines.

Ercker was an accurate recorder of facts, not a builder of theoretical systems. He writes with amazing clarity, with completely realistic descriptions of the apparatus used and straightforward instructions for various laboratory operations. His treatment of the subject is basically the same as found in any modern treatise on fire assaying, and in fact his work remained the standard text for several centuries after its first appearance.

In five books Ercker defines assaying and what knowledge the practicing assayer should possess. The first book deals with silver ores, how to distinguish them and the apparatus required to perform accurate tests, and refine the resultant metal. Book two describes the same for gold and its ores, while book three covers copper. Book four concerns lead, bismuth, tin, antimony, mercury, iron and lodestone. Book five describes the preparation of saltpeter and the assay of vitriol from pyrite and alum in the ores of alum.

English transl., 1951: Lazarus Ercker's | Treatise On | Ores And Assaying | translated from the German Edition of 1580 | By | Anneliese Grünhaldt Sisco | and | Cyril Stanley Smith | [in red, ornament] | The University Of

Chicago Press • Chicago • Illinois. 8°: [ij]-xxxiii, [1], [1]-[360] p. Title page in red and black.

Translation by Anneliese G. Sisco and Cyril Stanley Smith [see notes below], which includes extensive notes by the translators and title page reproductions of all the earlier editions of Ercker.

Anneliese Grünhaldt Sisco. (BORN: 1900; DIED:) German/American metallurgist & chemist. For many years, Sisco was an associate editor of *Alloys of Iron Research* in New York. She worked as a translator for several early works dealing with metallurgy and mining.

Cyril Stanley Smith. (BORN: Birmingham, England, 1903; DIED: Cambridge, Massachusetts, U.S.A., 25 August 1992) British/American metallurgist & chemist. Smith received his Ph.D. in metallurgy from MIT in 1926. From 1927 to 1942, he worked in industry for American Brass Company, where he received some 20 patents. During WWII he worked in Los Alamos on the Manhattan project. After the war he became a professor of metallurgy and director of the Institute for the Study of Metals at the University of Chicago. From 1961 until 1969, he taught metallurgy at the Massachusetts Institute of Technology. In science, he was renowned for his research in physical metallurgy, particularly in areas such as the role of interface energy and topology in the structure of polycrystalline materials and the application of metallography to the study of artifacts. He is also remembered for his books and articles that bring to light historical aspects of metallurgy.

REFERENCES: BL: [443.g.1.]. • Dana's 7th (Bibliography): 70. • Darmstädter, *Berg-Büchlein*, 1926: 92. • Dübner, *Heralds of Science*, 1955: no. 89. • *Freilich Sale Catalog*: no. 174. • Hoover Collection: no. 280. • LKG: III 30. • Norman Catalog: 1, 255, no. 707. • Norman Sale Catalog: no. ???? • NUC: 161, 220-1 [NE 0148241]. • Partington, *History of Chemistry*, 1961-70: 2, 404-7. • Wellcome Catalog (Books): 1, no. 2065. (Sisco) No references found. (Smith) Internet search. • *World Who's Who in Science*: 1563-4.

1549. 2nd edition, 1580: [In black:] Beschreibung/ | [in red:] Aller fürnemisten | Mineralischen Erztz vnnd | Berckwercks arten/ wie dieselbigen/ vnd eine jede in sonder= | heit/ jrer natur vnd eigenschafft nach/ auff alle Metaln Probirt/ vnd im kleinen | fewer sollen versucht werden/ mit erklärang etlicher fürnemer nützlicher Schmelztwerck/ im | grossen fewer/ auch scheidung Goldts/ Silbers/ vnd anderer Metaln/ Sampt einem bericht deß Kupffer= | saigerns/ Messing brennens/ vnd Salpeter siedens/ auch aller saltzigen Minerischen | proben/ vnd was denen allen anhengig/ in fünff Bücher verfast/ Deß= | gleichen zuuorn niemals in Druck kommen. | [in red:] Allen Liebhabern der Feuerkünste/ jungen Probirern vnd Bergkleuten | [in black:] zu nutz/ mit schönen Figuren vnd abriß der Instrument/ trewlich | vnd fleissig an tag geben. | [in red:] Auffß neue an vielen orten mit besserer außführung/ vnd mehrern Figur | [in black:] erklet/ Durch | [in red:] Den Weitberühmten Lazarum Erckern/ der Kôm. Kay. May. Ober= | [in black:] sten Bergmeister vnd Buchhalter/ im Königreich Behem/ &c. | [vignette] | [in red:] Mit Kôm. Keys. May. Priuilegien. | [in black:] Gedruckt zu Franckfurt am Mayn/ M. D. LXXX.

2°:)(4 A-Z⁴ a-k⁴ l⁵; 141ℓ.; [8] p., 1-134ℓ., [6] p. Title in red and black with vignette of a laboratory, 41 large woodcuts. Colophon (=l5v): "Gedruckt zu Franckfurt am Mayn / durch | Johannem Schmidt in verlegung Sigmunde | Feyrabends. | [woodcut ornament, dated M. D. LXXX.]" PAGE SIZE: 310 x 202 mm.

CONTENTS: [2 pgs/=(1r)-(1v), Title page, verso blank.; [5 pgs/=(2r)-(4r), Forword.; [1 pg/=(4v), "An Leser.;" ; Folios 1-134 (=A1r-l2v), Text.; [2 pgs/=(l3r-l3v), "Beschluss.;" ; [4 pgs/=(l4r-l5v), "Register / in welchem die fürnem= | ..."

RARE. Second edition. The fine woodcuts are repeated from the first edition, several of them full page, show mining and metallurgical operations of all kinds, including smelting and assaying, and give details

ERCKER

of apparatus, furnaces and so forth. Although Ercker has included a note to the reader indicating this edition contains many changes, these consisted only of adding figures 22, 35, 37, and 38 to 41.

REFERENCES: BL: [459.a.11.]. • Darmstädter, *Berg-Büchlein*, 1926: 92. • Dibner, *Heralds of Science*, 1955: 89. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 195. • NUC: 161, 220-1 [NE 0148244]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 752. • Wellcome Catalog (Books): 1, no. 2066.

1550. 3rd edition, 1598: [In black:] Beschreibung/ | [in red:] Aller fürnemisten | Mineralischen Ertzt vnnd | [in black:] Berckwercks arten/ wie dieselbigen/ vnd eine jede in sonderheit/ | jrer Natur vnd eygenschaft nach/ auff alle Metalla probirt/ vnd im kleinen Fewr | sollen versucht werden/ mit erklärang etlicher fürnemer nützlicher Schmelztwerck/ im grossen | Feuer/ auch scheidung Goldts/ Silbers/ vnd anderer Metalln/ Sampt einem Bericht deß Kupffer saigerns/ | Messing brennens/ vnd Salpeter siedens/ auch aller saltzigen Minerischen Proben/ vnd was de= | nen allen anhangig/ in fünff Bücher verfast/ Deßgleichen zuvorn | niemals in Druck kommen. | [in red:] Allen Liebhabern der Feuerkünste/ jungen Probirern vnd Bergkleuten | [in black:] zu nutz/ mit schönen Figuren vnd abriß der Instrument/ trewlich | vnd fleissig an tag geben. | [in red:] Auffß neue an vielen orten mit besserer außführung/ vnd mehrern Figur | [in black:] erklärt/ Durch | [in red:] Den Weitberühmten Lazarum Erckern/ der Kôm. Kay. May. Obersten | [in black:] Bergkneister vnd Buchhalter/ im Königreich Böhem/ &c. | Mit Kôm. Keys. May. Priuilegien. | [vignette] | [in red:] Gedruckt zu Franckfurt am Mayn/ durch Johan Feyerabendt. 1598.

2°:) (4 A-Z4 a-k4 l5; 141ℓ.; [8] p., 1-134ℓ., [6] p. Title in red and black with a vignette of a laboratory, 41 large text woodcuts. Colophon: l5v, "Gedruckt zu Frankfur am Mayn/ durch | Johannem Feyrabend. | [rule] | M. D. XCVIII." PAGE SIZE: 302 x 194 mm.

CONTENTS: [2 pgs/=(1r-)(1v), Title page, verso blank.; [5 pgs/=(2r-)(4r), Forword.; [1 pg/=(4v), "An Den Leser."; Folios 1-134 (=A1r-l2v), Text.; [2 pgs/=l3r-l3v], "Beschluß."; [4 pgs/=l4r-l5v], "Register / in welchem die fürnem= | ..."

VERY SCARCE. Third edition. The fine woodcuts, nine more in count than the first edition, show mining and metallurgical operations of all kinds, including smelting and assaying, and give details of appartatus, furnaces and so forth.

REFERENCES: Adams, *Cambridge Books*, 1967: E-918. • BL: [444.e.29.(1.)]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 195. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 242-3. • Hoover Collection: no. 281. • NUC: 161, 220-1 [NE 0148246]. • Shaaber, *Sixteenth Century Imprints*, 1976: E-352. • VD16: E3718. • Wellcome Catalog (Books): 1, no. 2067.

1551. 1623: [In black:] Beschreibung/ | [in red:] Aller fürnemisten | Mineralischen Ertzt vnnd | [in black:] Berckwercks arten/ wie dieselbigen/ vnnd eine jede in sonderheit/ | ihrer Natur vnd Eygenschaft nach/ auff alle Metalla Probirt/ vnd im kleinen Fewr | sollen versucht werden/ mit Erklärung etlicher fürnemer nützlicher Schmelztwerck/ im grossen | euwer/ auch scheidung Golts/ Silbers/ vnd anderer Metalln/ Sampt einem Bericht deß Kupffersaigerns/ Mes= | sing brennens/ vnnd Salpeter siedens/ auch aller saltzigen Minerischen Proben/ vnnd was | denen allen anhangig/ in fünff Bücher verfast/ Deßgleichen zuvorn | niemals in Druck kommen. | [in red:] Allen Liebhabern der Feuerkünste/ jungen Probirern vnd Bergkleuten | [in black:] zu nutz/ mit schönen Figuren vnd Abriß der Instrument/ trew= | lich vnd fleissig an tag geben. | [in red:] Auffß neue an vielen orten mit besserer außführung/ vnd mehrern Figur erklärt/ | [in black:] Durch | [in red:] Den Weitberühmten Lazarum Erckern/ der Kôm. Kay. May. Obersten Bergk= |

[in black:] meister vnd Buchhalter/ im Königreich Böhem/ &c. | [vignette] | [in red:] Gedruckt zu Franckfurt am Mayn/ in Verlegung Francisci Nico= | [in black:] lai Rhothii Anno M. DC. XXIII.

2°: [3], 134, [3]ℓ. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], Forword.; [1 pg], "An Den Leser."; Leaves 1-134, Text.; [2 pgs], "Beschluß."; [4 pgs], "Register."

REFERENCES: BL: [L.32/110].

1552. 4th edition, 1629: [In black:] Beschreibung | [in red:] Aller fürnemisten | Mineralischen Ertzt vnnd | [in black:] Berckwercks arten/ wie dieselbigen/ vnd eine jede insonderheit/ ihrer | Natur vnd Eygenschaft nach/ auff alle Metalla Probirt/ vnnd im kleinen Fewer sollen | versucht werden/ mit Erklärung etlicher fürnemer nützlicher Schmelztwerck/ im grossen Fewer/ auch | scheidung Goldts/ Silbers/ vnd anderer Metalln/ Sa:npt einem Bericht deß Kupffersaigerns/ Messing | brennens/ vnd Salpeter siedens/ auch aller saltzigen Mineralischen Proben/ vnd was denen | allen anhängig/ in fünff Bücher verfast/ Deßgleichen zuvorn niemals | in Druck kommen: | [in red:] Allen Leibhabern Feuerkünste/ jungen Probirern Bergleuten | [in black:] zu nutz/ mit schönen Figuren vnd Abriß der Instrument/ trew= | lich vnd fleissig an taggeben. | [in red:] Auffß neue an vielen Orten mit besserer Außführung vnd mehrern Figuren erklärt/ | [in black:] Durch | [in red:] Den Weitberühmten Lazarum Erckern/ der Kôm. Kay. May. Obersten Berg= | [in black:] meister vnd Buchhalter/ im Königreich Böhem/ &c. | [vignette] | [in red:] Getruckt zu Franckfurt am Mayn/ In Verlegung Gottfried Tampachs. | [in black, rule] | [in black:] Anno M. DC. XXIX.

2°: π1 A-Z4 a-k4 l5; 138ℓ.; [1], 134, [3]ℓ., title in red and black with vignette of a laboratory, 41 woodcuts in the text. Title in red and black.

CONTENTS: [2 pgs/=(π1r-π1v), Title page, verso blank.; Folios 1-134 (=A1r-l2v), Text.; [2 pgs/=l3r-l3v], "Beschluß."; [4 pgs/=l4r-l5v], "Register."

VERY SCARCE. Fourth edition, being an almost page for page reprint of the 1580 and 1598 editions.

REFERENCES: BL: [459.a.12.]. • Hoover Collection: no. 282. • LKG: III 30. • NUC: 161, 220-1 [NE 0148249]. • Roller & Goodman, *Catalogue*, 1976: 1, 366. • Wellcome Catalog (Books): 1, no. 2068.

1553. 5th edition, 1672: Aula subterranea domina dominantium subdita subditorum. Das ist: Vnterrerdische Hofhaltung, ohne welche weder die Herren regieren, noch die Vnterthanen gehorchen können. Oder gründliche Beschreibung derjenigen Sachen, so in der Tiefe der Erden wachsen, als aller Ertzen der königlichen und gemeinen Metallen, auch fürnehmster Mineralien, durch welche nächst Gott, alle Künste, Übungen und Stände der Welt gehandhabet und erhalten werden ... Vormalß durch den weltberühmten und gantz Teutschland zierenden Herrn Lazarum Ercker ... suffß treulichste beschreiben. Anitzo aber, wegen Abgang der Exemplarien suffß neue mit vielen nützlichen und nohtwendigen Stücken und Secreten, so entweder Herr Ercker übergangen, oder nach der Zeit inventirt worden, und andern Notis über S. [sic] Erckers Text mercklich vermehret, zusambt angehängter Auslegung der Terminorum und Redarten der Bergleute, Probierer, Wardeinen und Müntzmeister, deren sie sich was ihre Profession belangt, zu bedienen pflegen ... Franckfurt: In Verlegung J.D. Zünners, Buchhändlers. Gedruckt bey Paulus Hummen sel. Wittib., 1672.

2°: π4):(3 A-Z6 Aa-Ee6 a-d6 e2; 176ℓ.; [16], 332, [4] p., engraved title (dated 1673), 41 woodcuts in the text (many close to the size of a full page). Berward: [4], 47 p. Title in red and black. PAGE SIZE: 301 x 192 mm

VERY SCARCE. Fifth edition, revised and enlarged, with new title and an added engraved title page dated 1673. This edition of 1672 has a preface to the reader with a set of verses, written and signed by 'Iohannes Hiskias Cardalucius,' who seems to have been the acting editor,

though he speaks of 'other skilled miners' being engaged in preparing the text. This is also the first appearance with Ercker's work of C. Berward's, *Interpres Pharseologiae Metallurgicae* (Wittenburg, 1673), which would be reprinted in all subsequent editions. The fine woodcuts, several of them full page, show mining and metallurgical operations of all kinds, including smelting and assaying, and give details of apparatus, furnaces and so forth that first appeared in the earlier editions, are used again here.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 243. • Hoover Collection: no. 283. • LKG: III 31a. • NUC: 161, 220-1 [NE 0148233]. • VD17: 23:297970R. • Ward & Carozzi, *Geology Emerging*, 1984: no. 753.

1554. 6th edition, 1684: *Aula subterranea domina dominantium subdita subditorum*. Das ist Untererdische Hoffhaltung, ohne welche weder die Herren regieren, noch die Unterthanen gehorchen können. Oder Gründliche Beschreibung derjenigen Sachen, so in der Tiefe der Erden wachsen, als aller Ertzen der königlichen und gemeinen Metallen, auch fürnehmster Mineralien ... zusamt anhängter auslegung der terminorum und red-arten der bergleute probirer, wardeinen und müntzmeister deren sie sich was ihre profession belangt, zu bedienen pflegen ... Franckfurt: J.D. Zunner, 1684.

4^o:)(4)(4 A-Dd4 Ee2 (A)-(Q)4 a-h4 i2; [16], 220, 123 [4], 68 p., illus, tables. Title in red and black.

VERY SCARCE. Sixth edition, edited by Johannes Hiskias Cardalucius, with an added engraved undated title page recut from that in the 1672 edition. Pagination commences anew at the start of the Third Book. This printing is distinguished from all other German editions as being issued in quarto instead of folio. It does, however, contain the annotations that first appeared in the 1672 edition, and the end a reprinting of Christian Berward's *Interpres Pharseologiae Metallurgicae* (68 p.).

REFERENCES: BL: [444.e.11.]. • Hoover Collection: no. 284. • NUC: 161, 220-1 [NE 0148236].

1555. 7th edition, 1703: *Aula subterranea, domina dominantium, subdita subditorum*. Das ist: Untererdische Hoffhaltung, ohne welche weder die Herren regieren, noch die Unterthanen gehorchen können. Oder Gründliche Beschreibung derjenigen Sachen, so in der Tiefe der Erden wachsen, als aller Ertzen der königlichen und gemeinen Metallen, auch fürnehmster Mineralien ... Anjetzo auff's neue mit vielen nützlichen und nothwendigen Stücken und Secreten so entweder Herr Ercker übergangen oder nach der Zeit merckit worden und andern notis über sel. Erckers Text mercklich vermehret, zu samt anhängter Auslegung der terminorum und Rede-Arten der Bergleute, Progiierer, Wardeinen und Müntzmeister, deren sie sich, was ihre profession belangt, zu bedienen pflegen [durch Christianum Berwardum] Zum viertenmahl gedruckt. Franckfurt am Mayn: J.D. Zunner, 1703.

2^o: [12], 916 (i.e., 196), [4], 39 p. Title in red and black.

VERY SCARCE. Seventh edition, with the title page's claim to being a fourth printing being an error. It contains the same text, edited by Johannes Hiskias Cardalucius, with an added engraved title page from the same plate as the 1672 quarto edition with a vignette and border to occupy the difference in page sizes. The contents appear to be identical to the 1672 edition, and Berward's *Interpres pharseologiae metallurgicae* is appended at the end (39 p.).

REFERENCES: BL: [443.h.11.(1.)]. • *Freilich Sale Catalog*: no. 175. • LKG: III 31a. • NUC: 161, 220-1 [NE 0148239]. • Roller & Goodman, *Catalogue*, 1976: 1, 365-6.

1556. 8th edition, 1736: [In black:] *Aula Subterranea | Domina Dominantium | Subdita Subditorum*. | Das ist: | [in red:] Untererdische Hoffhaltung | [in black:] Ohne welche weder die Herren regieren/ noch die Unter= | thanen gehorchen können. | Oder | [in red:] Gründliche Beschreibung derjenigen Sachen/ so in | [in black:] der Tiefe der Erden wachsen/ als aller Ertzen der Königlichen und | gemeinen Metallen, auch

fürnehmster Mineralien, durch welche, nechst Gott, | alle Künste, Übungen und Stände der Welt gehandhabet und erhalten werden, da dann | fürnehmlich hierin gelehret wird, wie sothanige Ertz= und Bergwercks=Arten, jede insonderheit | ihrer Natur und Eigenschaft gemäß, auf alle Metalla probirt, und im kleinen Feuer versucht | werden, nebst Erklärung einiger fürnehmer nützlichen Schmelztzercke im grossen Feuer/ Item/ | Ertz scheiden, puchen, waschen und rösten, auch Scheidung Goldes, Silbers, und anderer Me= | tallen, ingleichem Kupffer saigern, Meßing brennen/ Distillation der Scheidwasser | und ihrem Brauch/ auch zu Nutzmachung anderer mineralischen | Berg= und Saltz=Arten. | Vormahls durch den Weitberühmten und ganz Teutschland zierenden | [in red:] Herrn Lazarum Ercker, | [in black:] Weiland der Römisch=Kaysrl. Maiest. obersten Bergmeister | aufs treulichste beschrieben. | [in red:] Anjetzo abre bey dieser neuesten Auflage nicht nur mit | [in black:] vielen nothwendigen Erläuterungen und Geheimnüssen, so entwe= | der Herr Ercker übergangen, und nach der Zeit erfunden worden, nebst andern | Anmerckungen über seel. Erckers Text um vieles vermehret/ sondern auch von allen | Fehlern aus sorgfältigste gereiniget. | [in red:] Zusamt einem neuen angehengten gründlichen Unterricht von dem | [in black:] Salpeter pflanzen, dessen Ausfied=Präparirung und Gebrauch, benebst einer | zulänglichen Nachricht von der Pulver=Manufactor, Dasseibige mit denen dazu gehörigen Mate- | rialien zuzubereiten/ wie auch Auslegung derer Kunst=Wörter/ welche sich die Bergleute/ | Probierer/ Wardeinen und Küntzmeister zu bedienen pflegen. | [in red:] Ein sehr vollständig und nützlich Werck für Berg= und Hütten=Bediente, und alle | [in black:] die mit Metallen und Mineralien umzugehen willens oder verbunden sind. | Mit vielen nothwendigen und zu mehrerer Erklärung dienenden | 42. Figuren gezieret. | Nach möglichstem Fleiß und Sorgfalt vermehrt und verbessert | Durch | J.E.C. | Einem des Berg= und Hütten=Wercks nebst dem Müntzwesen und der | Metallurgie erfahrenen Liebhaber. | Fünfte Auflage. | [rule] | Franckfurt am Mayn, | [in red:] Verlegt von Johann David Jung/ 1736.

2^o: π^5 A-3G² a-i²; 129ℓ.; [10], 1-208, [4], [1]-36 p. Title in red and black. Added engraved title page. PAGE SIZE: 330 x 205 mm.

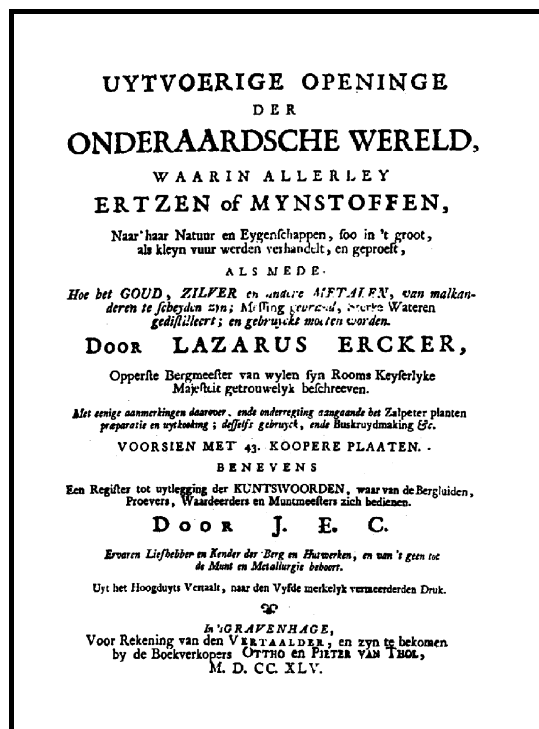
CONTENTS: Ercker's treatise: [Engraved title page]; [2 pgs], Printed title page, verso "Deut. cap. 8. vers. 7. & 9 | ..."; [4 pgs], Dedication, signed Johann David Jung, Autumn 1736.; [4 pgs], "Vorrede | Günstiger lieber Leser."; 1-208, Text.; [4 pgs], "Register.";

Berward's treatise: [1-2], Title page, verso blank.; [3-4], "Vorrede."; 5-36, "Bergläuffige Arten zu reden/ die dem Bau vorher= | gehen/ oder doch eiggentlich denselben nicht | betreffen."

VERY SCARCE. Eighth edition, with the designation as fifth edition on the title page being erroneous. This edition contains the annotations and text revisions of the 1672 edition and Berward's *Interpres Pharseologiae Metallurgicae* with separate pagination. A new section is added, designated the Second Appendix to the Fifth Book, which describes saltpeter plantations and the manufacture of gunpowder. This is illustrated with three additional woodcuts showing the recrystallization of saltpeter and the milling and graining of gunpowder.

REFERENCES: BL: [443.h.13.(1.)]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 195. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 244-5. • *Freilich Sale Catalog*: no. 176. • LKG: III 31a. • NUC: 161, 220-1 [NE 0148240]. • Roller & Goodman, *Catalogue*, 1976: 1, 366. • Ward & Carozzi, *Geology Emerging*, 1984: no. 754.

1557. Dutch transl., 1745: *Uytvoerige Openings | Der | Onderaardische Wereld, | Waarin Allerley | Ertzen of Mynstoffen, | Naar'haar Natuur en Eysgenschappen, soo in 't groot, | als kleyn vuur werden verhandelt, en geproest, | Als Mede. | Hoe het Goud, Zilver,*



UYTVOERIGE OPENINGS, 1745

en andere Metalen, van malkan- | deren te scheyden
zyn; Messing gebrand, sterke Wateren | gedistilleert;
en gebruyckt moeten worden. | Door Lazarus Ercker,
[...2 lines of titles and memberships...] | Met eenige
aanmerkingen daarover, ende onderregting aangaande het
Zalpeter planten | præparatie en uytkooking; desselfs
gebruyck, ende Buskruidmaking &c. | Voorsien Met
43. Koopere Plaat. | Een Register tot
uytlegging der Kuntswoorden, [!] waar van de Bergluiden
| Proevers, Waardeers en Muntmeesters zich bedienen.
| Door J.E.C. | [...2 lines of titles and memberships...]
| Uyt het Hoogduyts vertaalt, naar den Vyfde merkelyk
vermeederden Druk. | [ornament] | In 'sGravenhage, |
Voor Rekening van den Vertaelder, en zyn te bekomen
by de Boekverkopers OTTHO en PIETER VAN THOL, | M. D. CC. XLV.

2°: [10], [5]-51, 389, [7] p., 43 engraved plates on 35 folding ℓ . Title in red and black.

RARE. First Dutch edition. The fine woodcuts, several of them full page, show mining and metallurgical operations of all kinds, including smelting and assaying, and give details of appartatus, furnaces and so forth, have been recut from one of the earlier editions of Ercker. Included is C. Berward's *Interpres pharseologie metallurgicæ, ofte Uytlegginge van de voornaamste woorden en spreekwyzen die by de berglieden ... gebruykelyk zyn ... Te zaamen gevoegt ... door ... Christianum Bewardum*. 2°: [4], [5]-51 p.

REFERENCES: BL: [no copy listed]. • Hoover Collection: no. 285. • LKG: III 31a. • NUC: 161, 220-1 [NE 0148253].

1558. — English, 1951 [English transl.].

Lazarus Ercker's | Treatise On | Ores And Assaying | translated from the German Edition of 1580 | By | Anneliese Grünhaldt Sisco | and | Cyril Stanley Smith | [in red, ornament] | The

University Of Chicago Press • Chicago • Illinois.

8°: [i]-xxxiii, [1], [1]-[360] p. Title page in red and black. PAGE SIZE: 260 x 172 mm.

CONTENTS: [i-ii], Half title page, "Lazarus Ercker's | Treatise On | Ores And Assaying," verso blank; [iii], 5 lines of quotaton signed Sir John Pettus, 1683; [iv], Facsimilie of 1574 title page in red and black; [v], Title page.; [vi], Copyright information.; vii-xix, "Introduction."; [xx], Blank.; xxi-xxix, "Bibliographical Notes."; [xxx], Blank.; xxxi, "Table Of Contents."; xxxii-xxxiii, "List Of Illustrations."; [1 pg], Blank.; [1]-[324], Text.; 325-339, "Appendix A. | List of Previous Editions."; 340-342, "Appendix B | A Short Account of the Life of Sir John Pettus."; 343, "Appendix C | Systems of Weights and Measures Used by Ercker."; 344-349, "Appendix D | List of Works Used by the Translators."; [350], Blank.; 351-[360], "Index."

VERY SCARCE. Translation by Anneliese G. Sisco and Cyril Stanley Smith [see note below]. Included are title page reproductions of earlier editions, and extensive translator notes.

REFERENCES: NUC: 161, 220-1.

ERDMANN, Axel Joakim. (BORN: Stockholm, Sweden, 12 August 1814; DIED: Stockholm, Sweden, 1 December 1869) *Swedish mineralogist & geologist.*

Graduated 1833 from Uppsala and studied at the Mining Academy at Fahlun 1837-38. He studied under Berzelius the winter 1839-40, and continued after this chemical mineralogical investigations in his own private laboratory. He became an instructor at the Mining Academy in Fahlun 1850. Erdmann turned more and more towards geology and became the first leader of Sveriges Geologiska Undersökning (SGU), the geological survey of Sweden, that he founded 1858. From this time on he devoted himself to the organization of the survey and initiated and outlined the geological mapping of Sweden. Apart from the purely mineralogical works below Erdmann wrote monograph like articles on some of the mineralogically interesting ore-fields in Sweden that were published in the Transactions of the Royal Swedish Academy of Science: *Försök till en geognostisk-mineralogisk beskrifning öfver Tunabergs socken* (1848), *Dannemora jernmalmsfält i Upsala län* (1850) and *Utö jernmalmsfält i Stockholms län* (1854). Moreover, he published also a handbook in petrology *Vägledning till bergarternas kännedom* (1855). [Entry by Johan Kjellman]

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 80. • Lambrecht & Quenstedt, *Catalogus*, 1938: 130. • *Nordisk Familjebok*: 7, sp. 744-6. • Personal communication [Entry by Johann Kjellman]. • Poggendorff: 1, col. 675 & 3, 414. • Sarjeant, *Geologists*, 1980: 2, 963. • *Svenskt Biografiskt Handlexikon*: 1, 305-6. • *Svenskt Biografiskt Lexikon*: 14, 24-6.

1559. — Swedish, 1849.

Försök till en geognostisk-mineralogisk beskrifning öfver Tunabergs socken i Södermanland, med särskildt afseende på der belägne grufvor; 1849.

8°: 94 p., 6 colored maps (all folding). VERY SCARCE.

REFERENCES: BL: [no copy listed].

1560. — Swedish, 1853 [First edition].

Lärbok | i | Mineralogien | Af | Axel Erdmann, | Led. af K. Vet. Akad. | [rule] | Med 260 i Texten intryckta Trädsnitt. | [rule] | Stockholm, | Zacharias Hæggström, | 1853.

8°: π^8 1-308; 248 ℓ .; [i]-xv, [1] errata, [1]-480 p., index. PAGE SIZE: 220 x 130 mm. uncut.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication.; [iv], Blank.; [v]-x, "Företal."; xi-xv, Table of contents.; [1 pg], Errata.; [1]-472, Text.; 475-480, Index.

SCARCE. The book was written to fill the need of a Swedish handbook in mineralogy for higher education. Erdmann was well aware of the need for such a book and fit for the job as he at the time supervised the mineralogy, geology and mining courses at the Mining Academy in Fahlun, his former school. The last Swedish books in this category were the ones by Retzius (1795) and the uncompleted by Schwartz (1803), reminds us the author in the forward. It is divided in a general and a descriptive part. The first part is divided in the egenskaper and a short general discussion on systematics, the descriptive part is based on the system of Berzelius. [Entry by Johan Kjellman]

REFERENCES: BL: [no copy listed]. • Dana's 7th (Bibliography): 70. • Förf, Titel, år.

1561. 2nd edition, 1860: Lärobok | i | Mineralogien | af | Axel Erdmann, | [ornate rule] | Med 260 i texten intryckta trädsnitt. | [ornate rule] | andra omarbetade och tillökta upplagan. | [ornate rule] | Stockholm, | Zacharias Hæggströms Förlag, | 1860.

8°: π^4 1-378 38¹; 301 ℓ .; [i]-[viii], [1]-594 p., 260 illus.

CONTENTS: [i-ii], Title page, verso "Stockholm, tryckt hos J. & A. Riis, 1860."; iii-vii, Table of contents.; [viii], Errata.; [1]-583, Text.; [584], Blank.; 585-594, Index.

SCARCE. The text follows the same outline as the first edition but the descriptive part is doubled in size. [Entry by Johan Kjellman]

REFERENCES: BL: [no copy listed]. • Förf, Titel, år.

1562. — Swedish, 1855.

Vägledning | till | Bergarternas kännedom, | med särskild hänsyn till | Sveriges geologiska förhållanden | och med fästadt afseende tillika | på deras allmänna praktiska nytta och användbarhet | för | konstnärer, byggmästare, landtbrukare, o.s.v. | af | Axel Erdmann, | [...one line of titles and memberships...] | [rule] | Med i texten intryckta trädsnitt. | [ornate rule] | Stockholm. | Tryckt hos Isaac Marcus, | 1855.

8°: π^6 1-138; 110 ℓ .; [i]-xii, [1]-207, [1] p., 35 illus.

CONTENTS: [i-ii], Title page, verso blank.; [iii-iv], Forward, verso blank.; [v]-xii, Table of contents.; [1]-3, Introduction.; 4-196, Text; [197]-207, Index; [1 pg], blank.

VERY SCARCE. An early work on petrology and petrography studies of Sweden. [Entry by Johan Kjellman]

REFERENCES: NUC. • SWIM.

ERDMANN, Edvard. (BORN: Stockholm, Sweden, 1 October 1840; DIED: Stockholm, Sweden?, 8 September 1923) *Swedish geologist & mineralogist.*

The son of Axel Erdmann. Followed in his fathers footsteps and became assisting geologist in the newly started geological survey, where he stayed and held different positions during his career. From 1871 until retiring he was responsible for the collections of the geological survey. Erdmann was actively trying to popularize the field of geology with several small books, pamphlets and articles in the subject, it is in this context his writings on mineralogy came to be.

REFERENCES: Gavelin, S., "Edvard Erdmann," *Geologiska Föreningen i Stockholms Förhandlingar*, **46** (1924), p. 682-691.

1563. — Swedish, 1874.

Populär geologi (jämte mineralogi) En framställning af jordytans sammansättning, bildning och fortfarande omgestaltning, med afseende särskildt fästadt vid svenska förhållanden. Af Edvard Erdmann geolog vid Sveriges Geologiska Undersökning. med 65 träsnitt. Stockholm, 1874. P. A. Norstedt & söner.

8°: 189 p., 65 illus.

SCARCE. A general handbook on geology with a short part on mineralogy. [Entry by Johan Kjellman]

REFERENCES: NUC. • SWIM.

1564. 2nd editon, 1876: Populär geologi | (jämte mineralogi) | En framställning af jordytans sammansättning, bildning och fortfarande om- | gestaltning, med afseende särskildt fästadt vid svenska förhållanden. | Af | Edvard Erdmann-geolog vid Sveriges Geologiska Undersökning. | [vignette: stratigraphic and tectonic profile] | Genomskäring af en del af jordskorpan. | [rule] | Andra upplagan | [rule] | med 61 träsnitt. | [ornament] | Stockholm, 1876. | P.A. Norstedt & söner | Kongl. Boktryckare.

8°: π^4 1-128 13⁴ 14¹; 210 ℓ .; [i]-[viii], [1]-202 p., 61 illus.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, Forward.; [v]-vii, Contents.; [viii], blank; [1]-202, Text.

VERY SCARCE. JKjellman

REFERENCES: NUC. • SWIM.

1565. — Finnish, 1890.

Kansantajuinen geologiaa (ynnä mineralogiaa). E. Erdmann. Mukailemalla toisesta painoksesta suom. A. J. Waren ja G. V. Levander. Helsinki, 1890.

8°: vii, 195 p. Published as: *Schriftenreihe: Suomalaisen kirjallisuuden Seuran toimituksia*, no. 74.

VERY RARE. The first textbook of geology and mineralogy written and published in the Finnish language.

REFERENCES: BL. • NUC.

ERNDTTEL, Christian Heinrich.

1566. — Latin, 1730.

Warsavia Physice Illustrata, sive de Aere, Aquis, locis et incolis Warsaviæ, eorundemque moribus et morbis tractatus. Cui annexum est viridarium, vel catalogus plantarum circa Warsaviam nascentium. Auctore Christiano Henrico Erndtelio ... Dresdæ, J.G. Zimmermann hæred & J.N. Gerlach, 1730.

4°: [8], 7, 247, [1], 132 p., 2 folding plates.

VERY SCARCE. A description of the physical geography of Poland in the vicinity of Warsaw, including descriptions of the air, water, and geology.

REFERENCES: LKG: XIV 721.

ERNI, Henry. (BORN: Switzerland, 22 January 1822; DIED: Washington, D.C., U.S.A., 18 May 1885) *Swiss/American chemist & metallurgist.*

Erni was educated in an industrial school and the University of Zurich where he studied chemistry and other

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sciences. In 1848, he emigrated to the United States and found work as BENJAMIN SILLIMAN's assistant in Yale's chemical laboratory in 1849. He became a professor of chemistry, mineralogy, French and German at the University of Tennessee in 1850, but resigned in 1852 due to overwork. In 1854, Erni went to the University of Vermont as professor of chemistry, toxicology and pharmacy in the Medical Department as well as professor of natural philosophy in the Academic Department. He took a position at Shelby Medical College in Nashville in 1859, but at the outbreak of the Civil War caused this job to evaporate. Hired as the first chemist in the Department of Agriculture in 1862, Erni studied the fermentation process and various soil types. In 1866, he became an examiner in the U.S. Patent Office, handling chemistry and physics inventions. President Grant appointed him consul at Basle, Switzerland in 1869. He remained there until 1878, when he returned to Washington, taking a succession of part time jobs. Erni was a founding member of the Chemical Society of Washington in 1884.

REFERENCES: ABA: I 510, 196-198. • *American Chemists & Chemical Engineers*: 1, 146-7 [by W.D. Miles]. • Miles, W.D. and L. Kuslan, "Washington's first consulting chemist, Henri Erni," *Records Columbia Historical Society 1966-1968*, 66-68 (1969), 154-66, portrait. • Rogers, A.C., *Our representatives abroad*. New York, Atlantic Publishing Co., 1874: pp. 274-5, portrait. • WBI.

1567. — English, 1867 [First edition].

Mineralogy Simplified: | A Short Method | of
| Determining And Classifying | Minerals, | by
| means of | Simple Chemical Experiments In The
| Dry And Wet Way. | Translated From The Last
German Edition Of | F. Von Kobell, | With An
Introduction To Blowpipe Analysis And Other |
Additions By | Dr. Henri Erni, | Chief Chemist
Department Of Agriculture. | [rule] | Philadelphia:
| Henry Carey Baird, | Industrial Publisher, | 406
Walnut Street. | 1867.

8°: vii, [13]-206 p., 3 folding tables.

SCARCE. Originally written as an English translation of Franz von Kobell's *Die Mineralogie* [which see under Kobell] in 1867, Erni made the work his own producing several more editions to 1908.

REFERENCES: NUC: 301, 139-44 [NK0214922].

1568. 2nd edition, 1885: Mineralogy Simplified. | Easy
Methods Of Identifying Minerals, | Including Ores, | By
Means Of The Blowpipe, By Flame Reactions, | By The
Spectroscope, And By Humid | Chemical Analysis, | Based
On Prof. Von Kobell's Tables For The | Determination Of
Minerals. | With An Introduction To Modern Chemistry.
| By | Henri Erni, A.M., M.D., | Late Professor Of
Chemistry, Some Time Chief Chemist Of The United States
| Department Of Agriculture. | Second Edition, Revised
And Enlarged. | Illustrated By One Hundred And Twenty-
One Engravings. | Philadelphia: | Henry Carey Baird &
Co., | Industrial Publishers, Booksellers, And Importers, |
810 Walnut Street. | London: E. & F.N. Spon, 125 Strand.
| 1885.

8°: xxiv, [25]-395 p., 3 folding tables. SCARCE.

REFERENCES: NUC. • *USGS Library Catalog*.

1569. 4th edition, 1908: Mineralogy simplified. Easy methods
of identifying minerals, including ores. By means of the
blow-pipe, by flame reactions, by humid chemical analysis,
and by physical texts. Fourth edition, revised, rearranged,
and with the addition of entirely new matter, including
crystallography, tables for the determination of minerals by
chemical and pyrognostic characters. Philadelphia, Henry

Carey Baird, 1908

12°: xxx, 414 p., 123 text illus.

SCARCE. This edition has been issued in pocket size
form for the 'prospector and mineralogist'.

REFERENCES: NUC.

ERSCH, Johann Samuel. (BORN: Großglogau (now
Glogów), Silesia, Germany, 23 June 1766; DIED: Halle,
Germany, 16 January 1828) *German bibliographer &
geographer*.

In 1785 Ersch entered the University of Halle to
study theology, but soon became more involved with
history, bibliography, and geography. Beginning in 1788 he
published the first of many bibliographical works, for which
he is generally regarded the father of German bibliography.
In 1803 he accepted the chair of geography and statistics
at Halle, and in 1808 was, made principal librarian.

REFERENCES: ADB. • DBA: I 292, 92-114. • *Encyclopaedia Britannica*, 11th edition. • Günther, *Geschichte der Erdkunde*, 1904. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Internet search. • *Neuer Nekrolog der Deutschen*. • WBI.

1570. — German, 1785-1800 [Bibliography].

Allgemeines Repertorium der Literatur für die
Jahre 1785-1790. Jena und Weimar, 1793-1807.

8 vols. Volumes covering the years 1785-1790.
[VOL 1] 4°: [8], 562 unnumb. p. [VOL 2] 4°: [4], 22,
574 unnumb. p. [VOL 3] 4°: xii, 410, 35, 52, 78 p.
Volumes covering the years 1791-1795. [VOL 1] 4°: [8],
673 unnumb. p., [2], 18, 222 unnumb. p. [VOL 2] 4°: [2],
12, 454 unnumb. p., [2], 245 unnumb. p. [VOL 3] 4°: viii,
262, 224 56 p. Volumes covering the years 1796-1800.
[VOL 1] 4°: viii, 671 unnumb. p. [VOL 2] 4°: [2], 539
unnumb. p., 17, 115 p.

CONTENTS: *Volumes covering the years 1785-1790*. [Vol
1] [2 pgs], Title page, verso blank.; [4 pgs], "Erklärung
der bey der Anführung der kritischen Journale gebrauchten
Abkürzungen und Zeichen."; [2 pgs], "Erklärung der
Abkürzungen der Vornahmen."; [1]-[562], Text.

[Vol 2] [2 pgs], Title page, verso blank.; 1-22, "Auszug
der Encyclopädischen Tafel, nach welcher das systematische
Register angelegt worden ist."; [1]-574, Text.

[Vol 3] [i-ii], Title page, verso blank.; [iii], Dedicat-
tion.; [iv], Blank.; v-xii, "Vorrede."; 1-410, "Alphabetisches
Verzeichniss der in der Allgemeinen Literatur-Zeitung
von 1785 bis 1790 recensirten, auch der ausserdem noch
im systematischen Register dieses Repertorius aufgefö-
führten Schriften."; 1-35, "Alphabetische Nachweisung der
vornehmsten Materien welche in den im systematischen
Register des Repertorius aufgeführten Klassen von Büch-
ern behandelt werden."; 1-52, "Personenregister der Allge-
meinen Literatur-Zeitung von 1785 bis 1780."; 1-78, "Re-
alregister der Allgemeinen Literatur-Zeitung von 1785 bis
1790."

Volumes covering the years 1791-1795. [Vol 1] [2 pgs],
Title page, verso blank.; [4 pgs], "Ankündigung des
zweyten Allgemeinen Repertorii; an Statt einer Vorrede.";
[1 pg], "Ersten Abtheilung."; [1 pg], Blank.; 1-12, "Auszug
der Encyclopädischen Tafel, nach welcher das systematische
Register angelegt ist."; [4 pgs], "Erklärung der bey der
Anführung der kritischen Journale gebrauchten Abkürzungen
und Zeichen."; [2 pgs], "Erklärung der Abkürzungen
und Vornahmen."; [1]-[778], Text.

[Vol 2] [2 pgs], Title page, verso blank.; 1-12, "Auszug
aus der Encyclopädischen Tafel, nach welcher das system-
atische Register angelegt ist."; [1]-[703], Text.

[Vol 3] [i-ii], Title page, verso blank.; [iii]-viii, Fore-
word.; [1]-260, "Alphabetisches Verzeichniss der im system-
atischen Register des Allgemeinen Repertorius der Liter-
atur für die Jahre 1791 bis 1795 aufgeführten Schriften. [A-

L.]; [1]-224, [M-Z]; 1-56, "Alphabetische Nachweisung der vornehmsten Materien, welche in den im systematischen Register des Repertoriiums aufgeführten Büchern behandelt werden."

Volumes covering the years 1796-1800. [Vol 1] [i-ii], Title page, verso blank.; [iii]-iv, "Vorerinnerungen."; [v]-viii, "Erklärungen der Abkürzungen und Zeichen."; [1]-[670], Text.; [671], "Encyclopädische Tafel nach welcher das Systematische Register angelegt ist."; [1 pg], Blank.

[Vol 2]

RARE. Edited by Johann Samuel Ersch, this is a general bibliography that includes science and natural history for the period 1785 to 1800. It is rich in citations for books and articles from journals and periodicals that were published in both Germany and foreign countries, and even includes the criticisms to which each book had been subjected. It is divided into 16 major subject divisions that were arranged into subsections: (I) Bibliography, (II) Linguistics, (III) Theology, (IV) Jurisprudence, (V) Medicine, (VI) Philosophy, (VII) Pedagogic, (VIII) Political science, (IX) War science, (X) Natural sciences including mineralogy, (XI) Economics, (XII) Mathematics, (XIII) Geography and atlases, (XIV) Art, (XV) Literature, and (XVI) General writings. Buried within the natural history and mathematics sections are citations to mineralogy, crystallography and associated sciences.

Facsimile reprint, 1969: *Allgemeines Repertorium der Literatur.* Peter Lang, 1969. [ISBN: 3261004991].

REFERENCES: BL: [435.c.20-27.]. • LKG: I 18. • NUC. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 85.

1571. — German, 1813.

Literatur | der | Mathematik, Natur- | und | Gewerbs-Kunde, | mit Inbegriff der | Kriegskunst | und anderer Künste, ausser den schönen, | seit der Mitte des achtzehnten Jahrhunderts | bis auf die neueste Zeit; | systematisch bearbeitet | und | mit den nöthigen Registern versehen | von | Johann Samuel Ersch, | Professor und Bibliothekar auf der Universität zu Halle, | aus dessen | Handbuche der deutschen Literatur | besonders abgedruckt. | [wavy rule] | Den Herren | Professoren Gilber, Kastner, Leonhardi, Pfaff u. Weber | zu Leipzig, Halle und Breslau | gewidmet. | [tapered rule] | Amsterdam und Leipzig, | Kunst- und Industrie-Comptoir. | 1813.

8°: [2] p., 760 cols.

CONTENTS: [2 pgs], Title page, verso blank.; Cols. [1]-648, Text.; Cols. 649-758, Indexes.

VERY SCARCE. An index of works on mathematics (pure and applied), military science, art, nature, and general science.

REFERENCES: BL: [11904.bbb.4.(5.)]. • LKG: I 19a. • NUC. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 579.

1572. — German, 1828 [2nd edition].

Literatur der Mathematik, Natur- und Gewerbs-Kunde mit Inbegriff der Kriegskunst und anderer Künste, ausser den Schönen, seit der Mitte des achtzehnten Jahrhunderts bis auf die neueste

Zeit; systematisch Bearbeiten und mit dennöthigen Registern versehen von Johann Samuel Ersch ... Neue fortgesetzte ausgabe von Franz Wilhelm Schweigger-Seidel ... Aus der neuen Ausgabe des Handbuchs der deutschen Literatur besonders abgedruckt. Leipzig: F.A. Brockhaus, 1828.

8°: [2], [v]-x, [2] p., 1740 cols. **VERY SCARCE.**

Facsimile reprint, 1982: *Handbuch der Deutschen Literatur.* Hildesheim, New York, Georg Olms, 1982. 8 vols. Bd. 1. Literatur der Philologie, Philosophie und Pädagogik bearbeitet von Ernst Gottfried Adolph Böckel. Bd. 2. Literatur der Theologie bearbeitet von Ernst Gottfried Adolph Böckel. Bd. 3. Literatur der Jurisprudenz und Politik bearbeitet von Johann Christian Koppe. Bd. 4. Literatur der schönen Künste bearbeitet von Johann Karl August Rese und Christian Anton Geissler. Bd. 6. Literatur der Mathematik, Natur- und Gewerbskunde bearbeitet von Franz Wilhelm Schweigger-Seidel. Bd. 7-8. Literatur der Geschichte und der vermischten Schriften bearbeitet von Christian Anton Geissler.

REFERENCES: BL: [no copy listed]. • Bridson, *History of Natural History*, 1994: Ca269. • LKG: I 19a. • NUC.



ERXLEBEN

ERXLEBEN, Johann Christian Polykarp. (BORN: Quedlinburg, Germany, 22 June 1744; DIED: Göttingen, Germany, 19 August 1777) *German naturalist.*

Erxleben was born the son of a theologian, and his mother would be the first woman in Germany to be awarded the degree doctor of medicine. Erxleben began studying medicine at Göttingen, but turned his attention to natural history subjects. He became a professor of physics at the University of Göttingen in 1771. He built a good reputation throughout Europe, and his classes at the university widely attended.

REFERENCES: ADB: 6, 335. • DBA: I 292, 233-250. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 679. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • Wagenitz, *Göttinger Biologen*, 1988: 54. • WBI.

1573. — German, 1768.

Johann Christian Polykarp Erxlebens, | [...2 lines of titles and memberships...] | Betrachtungen | der | Ursachen der Unvollständigkeit | der Mineralsysteme. | [rule] | Nebst einer Anzeige seiner Vorlesungen. | [ornate rule] | Göttingen, | gedruckt bey Friedrich Andreas Kosenbusch, Factor. | 1768.

8°: $\pi^2 \cdot 2 \cdot 3^2 \chi^2$; 4 ℓ .; [1]-8 p.

CONTENTS: [2 pg], Title, verso blank.; [3]-8, Text.

VERY RARE. This work considers reasons why no correct mineral system had yet been devised. The author attributes this dilemma to two problems. The first was that no one had yet accurately investigated minerals from a chemical standpoint, and the second was that a very few, true species of minerals had been endlessly mixed in the earth, resulting in a seemingly endless variety of species to the mineralogists.

REFERENCES: *Berlinische Sammlungen*: 3, 643-44. • BL: [B.371.(1.)]. • Cobres, *Deliciae Cobresianae*, 1782: 1, 223. • Fischer, *Mineralogie in Sachsen*, 1939: 143 & 278. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 21. • *Göttingische gelehrte Anzeigen*: (1768), 513. • LKG: XII 191. • NUC: [no copy listed].

1574. — German, 1768 [First edition].

Anfangsgründe der Naturgeschichte. Zum Gebrauche Akademischer Vorlesungen. Von Johann Christian Polykarp Erxleben ... Göttingen und Gotha, Bey Johann Christian Dieterich, 1768.

2 vols. [VOL 1] 8°: *⁸ A-R⁸; 144 ℓ .; [16], 271, [1] p. [VOL 2] 8°:)(⁴ A-R⁸ S⁴; 145 ℓ .; [8], 281 (i.e., 279), [1] p. Pages 216-217 omitted in numbering; pages 93-112 numbered 39-58.

VERY RARE. This popular and influential introduction to natural history went through over half a dozen issues before the close of the 18th century. A bibliographer at heart, Erxleben provides many references for further reading, while describing the animal, mineral and vegetable kingdoms. After his death, Johann Friedrich Gmelin [see note below] took on the role of editor in 1782, and in this capacity continued to issue the text with references to the latest discoveries.

1773: ... Zwote, vermehrte und verbesserte Auflage mit Kupfern. Göttingen; Gotha, bey Johann Christian Dieterich, 1773. 8°: [37], 592, [12] p., 6 folding plates.

1782: ... Aus neue herausgegeben von Johann Friedrich Gmelin. Göttingen, J.C. Dieterich, 1782. 8°: liv, 756 p., 6 folding plates.

1784: Göttingen, J.C. Dieterich, 1784.

1786: Frankfurt, 1786. 8°: xlvii, 756 p., 6 folding plates.

1787: Vienna, Gedruckt bey Johann Thomas Edlen von Trattnern, 1787. 8°: lxxviii, 756 p., 6 folding plates.

1797: Wien, Gedruckt bey Johann Thomas Edlen von Trattnern, 1797. 8°: xlviii, 671 p., 6 folding plates.

Johann Friedrich Gmelin. (BORN: Tübingen, Germany, 8 August 1748; DIED: Göttingen, Germany, 1 November 1804) *German mineralogist & naturalist*. Gmelin was father of the physician and chemist, Leopold Gmelin [1788-1853]. He was professor of medicine at Tübingen and professor of philosophy and medicine at Göttingen. In the spirit of his time, Gmelin worked in the fields of natural history, mineralogy, chemistry, entomology and botany.

REFERENCES: *Berlinische Sammlungen*: 6 (1768), p. 198

& 9 (1769), p. 542. • BL: [955.b.5.]. • Cobres, *Deliciae Cobresianae*, 1782: 1, 223 [Second edition only]. • Fischer, *Mineralogie in Sachsen*, 1939: pp. 143 & 278. • *Freilich Sale Catalog*: no. 177. • Jonathan Hill, Bookseller: cat. 11 (1982), no. 51. • Partington, *History of Chemistry*, 1961-70: 3, 591. • Roller & Goodman, *Catalogue*, 1976: 1, 367 [1773 & 1784 editions]. • Schröter's *Journal für die Liebhaber*: 4 (1770), p. 551. (Gmelin) ADB: 9, 270. • *Catalogue of Portraits of Naturalists*: 485 [1 portrait listed]. • DBA: I 398, 336-366; II 455, 232-235. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1951-2. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 580. • Lambrecht & Quenstedt, *Catalogus*, 1938: 165. • Poggendorff: 1, cols. 914-5. • Schaedler, *Biographisch Handwörterbuch*, 1891: 42-3. • Wagenitz, *Göttinger Biologen*, 1988: 65. • WBI. • *World Who's Who in Science*: 665.

ESCHWEGE, Wilhelm Ludwig von. (BORN: 1777; DIED: 1855) *German mining engineer*.

Eschwege studied mineralogy, geology and mining engineering at the University of Marburg. After several years working at mines in Germany as an engineer and administrator, he was selected in 1810 to become the director of the mineral cabinet in Rio De Janeiro. In 1824, he became the director of the Bureau of Mines in Lisbon. He retired to Germany.

REFERENCES: *Der Aufschluss*: 33 (1982), no. 3, 20. • Poggendorff: 1, cols. 682-3. • Sommer, F., *Wilhelm Ludwig von Eschwege, 1777-1855. Lebensbild eines Auslandsdeutschen mit kulturgeschichtlichen Erinnerungen aus Deutschland, Portugal und Brasilien*. Stuttgart, 1928. 190 p., 6 plates. [Published as: *Schriften des Deutschen Ausland-Instituts Stuttgart*, Reihe D, Bd. 2.; BL Ac.2319.d.].

1575. — German, 1818.

Journal von Brasilien, oder vermischte Nachrichten aus Brasilien auf wissenschaftlichen Reisen gesammelt von W[ilhelm] [Ludwig] C. von Eschwege, Königl. Portugies. Oberstlieutenant des Ingenieur=Corps, General=Director aller Goldbergwerke und Inspector verschiedener Berg= und Hüttenwerke in der Capitanie Minas Geraes, Directeur des Königl. Mineralien=Cabinets in Rio de Janeiro, correspondirendem Mitgliede der Königl. Akademie der Wissenschaften zu Lissabon und der Kaiserl. in St. Petersburg, so wie der mineralogischen Gesellschaft zu Jena. – Erster-Zweiter Heft. – Weimar, im Verlage des Landes=Industrie=Comptoirs. 1818.

2 vols. [VOL 1] 8°: xvi, 242 p., plates. [VOL 2] 8°: xii, 304 p., plates.

CONTENTS: [Vol 1] [vii]-xii, "Vorrede" by Friedrich Justin Bertuch.; [xii]-xiv, "Inhalt.;" [xv]-xvi, "Erklärung der Kupfertafeln.;" [1]-242, Text.

[Vol 2] [vii]-ix, "Inhalt des zweiten Heftes.;" [viii]-xii, "Erklärung der Kupfer.;" [1]-304, Text.

VERY SCARCE. This work describes the author's travels in Brazil, and includes descriptive observations on the natives and mining activities, especially diamonds, but also gold, beryl, topaz, etc. In the second volume there is a description of diamonds contained in the Royal mineral cabinet. as well as meteorological observations.

REFERENCES: BL: [no copy listed]. • Borba, *Bibliographia Brasiliana*, 1983. • NUC.

1576. — German, 1832.

Beiträge | zur | Gebirgskunde Brasiliens | von | W.L. von Eschwege, | [...2 lines of titles and memberships...] | [rule] | Mit vier petrographisch-geognostischen Karten | und Profildurchschnitten. | [rule] | Berlin | gedruckt und verlegt bei G. Reimer. | 1832.

2 parts in one volume. 8°: [i]-xiv, [1]-488 p., 4 folded lithographed geological maps and profiles, of which one is hand-colored with 16 different colours (size 117x35cm).

CONTENTS: [i-ii], Title page, verso blank.; [iii-vi], Dedication to Humboldt.; [vii-x], "Vorwort."; [xi]-xiv, "Inhalt."; [1], Sectional title page.; [2], Blank.; [3]-488, Text (part 1, p. 1-322, part 2, p. 323-488).

RARE. Dedicated to Alexander von Humboldt, this is the first serious geological description of Brazil, including its first geological map.

REFERENCES: BL: [970.d.32.]. • Borba, *Bibliographia Brasiliana*, 1983. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 22829.

1577. — German, 1833.

Pluto Brasiliensis. | [rule] | Eine Reihe von Abhandlungen über Brasiliens Gold-, | Diamanten- und anderen mineralischen Reichthums, | über die Geschichte seiner Entdeckung, über das Vor- | kommen seiner Lagerstätten, des Betriebs, der Ausbeute | und die darauf bezügliche Gesetzgebung u.s.w. | Von | W.L. von Eschwege, | Königl. Portugies. Ingenieur-Oberst und Oberberghauptmann u.s.w. | Nebst lithographirten Karten und Zeichnungen. | [double rule] | Berlin, | G. Reimer. | 1833.

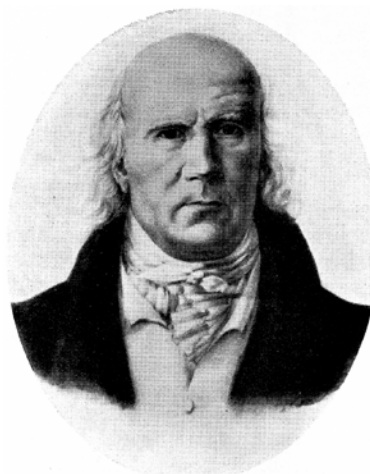
8°: [6], [iii]-xviii, 622, [2] p., lithographed frontispiece, 23 folding tables (2 in the text and 11 at the end numbered 1-21), 4 folding maps and 5 folding plans. PAGE SIZE: 214 x 132 mm.

CONTENTS: [Frontispiece.]; [2 pgs], Title page, verso blank.; [4 pgs], Dedication, dated 1 June 1833.; [iii]-vi, "Vorwort."—dated 1 July 1832.; [vii]-xviii, "Inhalt."; [1]-614, Text.; [615]-622, "Druckfehler."

VERY SCARCE. This is an outstanding, carefully researched work which reflects the author's extensive knowledge of Brazilian mining, acquired through numerous years of practical experience while a resident in the country. The text covers gold and diamonds, principally, but also mentions other gemstones such as beryl, topaz, chrysoberyl and euclase. The author has also provided a history of the discoveries of gold and gemstones in Brazil.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 2, 362. • BL: [no copy listed]. • Borba, *Bibliographia Brasiliana*, 1983: 1, 294. • Fischer, *Gesteins- und Lagerstättenbildung*, 1961: p. 452 [mention only]. • *Freilich Sale Catalog*: no. 178. • Sabin, *Dictionary*, 1868-1936: no. 22830. • Sinkankas, *Gemology Bibliography*, 1993: no. 1947.

ESMARK (Esmarch), Jens. (BORN: Houlberg, Stift Aarhus, Denmark, 31 December 1763; DIED:



ESMARK

Christiania, Denmark, 26 January 1839) *Danish mineralogist & metallurgist.*

After an extended trip through eastern Europe, Esmark (or Esmarch) was appointed in 1802 lecturer on mineralogy and physics at the University of Kongsberg. Then in 1814, he became professor of mining science at the University of Christiania.

REFERENCES: *Dansk Biografisk Haandleksikon*. • *Dansk Biografisk Lexikon*. • DBA: I 294, 269-270. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 178-9, portrait. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • *Neuer Nekrolog der Deutschen*. • Poggendorff: 1, cols. 683-4 & 1562. • SBA: Scandinavian Biographical Archive: I A-75, 90-102. • WBI.

1578. — German, 1798.

Kurze Beschreibung | einer | mineralogischen Reise | durch | Ungarn, Siebenbürgen und das | Bannet | von | Jens Esmark. | [rule] | [rule] | Freyberg, 1798. | im Verlage der Grazischen Buchhandlung.

8°: π^1 A-M⁸; 97 ℓ .; [2], [1]-191, [1] p. PAGE SIZE: 208 x 116 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-6, "Vorerinnerung."—signed Jens Esmark, 22 April 1797.; 7-191, Text.; [1 pg], Blank.

VERY SCARCE. This short text outlines an extensive trip made by the author from 1791 to 1797 to examine the mineral wealth and methods used in a rich mining region of the Austro-Hungarian empire. The area visited now includes the portions of The Czech Republic, Hungary and Transylvania.

REFERENCES: BL: [973.b.31.]. • LKG: XIV 857. • NUC: 162, 227 [NE 0168303].

ESPER, Eugen Johann Christoph. (BORN: Wunsiedel, Germany, 2 June 1742; DIED: Erlangen, Germany, 27 July 1810) *German zoologist.*

Esper was active as a professor for philosophy and as a director of the material assets collection of the University of attaining and published from 1776 to [1830] its famous work *Die Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen*. Esper's scientific work concentrated on systematics, taxonomy, fauna and bio-geography.

REFERENCES: ADB. • DBA: I 294, 289-333; II 341, 103-104. • Hamberger & Meusel, *Gelehrte Deutschland*,

ESTNER

1796-1834. • NDB: 4, 655 [by F. Heller]. • Poggendorff: 1, cols. 684-5. • WBI.

1579. — German, 1810.

Lehrbuch | der | Mineralogie | in | kurzem
Auszug | der | neuern mineralogischen Systeme
| zum | Gebrauch academischer Vorlesungen | und
Einrichtung mineralogischer Sammlungen | von |
Eugenius Johann Christoph Esper, | [...13 lines of
titles and memberships...] | [tapered rule] | Erlangen,
| bey Johann Jacob Palm. | 1810.

8°: π^4 A-Z⁸ Aa-Gg⁸ [Hh⁸] Ii⁴ Kk³; 259ℓ.; [i]-viii,
[1]-510 p., index. PAGE SIZE: 197 x 115 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-viii,
"Vorbericht."; [1]-472, Text.; 473-510, "Namen Register."

VERY SCARCE. Based upon the specimens in the mineralogical museum of the Friedrichs-Alexanders University in Erlangen, of which Esper was curator. The author attempts to create a new mineralogical classification that is based upon Leonhard, Merz and Kopp's *Systematisch-Tabellarische übersicht und charakteristik der Mineralkörper* (Frankfurt am Main, 1806). Whereas the earlier work was essentially theoretical, Esper applies the theory to the mineral collection in a practical treatment. Esper provides the standard data for each mineral species including species, family, name, synonyms (mostly from Gmelin's translation of Linneaus), localities, chemical characters, petrifications are treated separately, characteristics based on the works of Emmerling, Estner, Suckow and Reuss. The book has a short introduction that defines terms, while the remainder is devoted to the description of the species.

REFERENCES: BL: [726.f.25.]. • DSB: 12, 184. • Leonard's *Taschenbuch*: 5, 329. • LKG: XII 184. • NUC: [no copy listed].

1580. — German, 1784.

Naturgeschichte im Auszüge des Linneinchen Systems, mit Erklärung der Kunstwörter und des Verzeichniss sämtlicher Geschlechter und Gattungen; nebst Bemerkung der europäischen und innländischen Arten, wie auch sieben zur Kenntniss derselben dienenden Kupfertafeln zum Gebrauch academischer Vorlesungen. Nürnberg, G.N. Räspe, 1784.

8°: 740 p., 7 plates.

RARE. This general introduction to Linnaeus' classification system apparently has substantial mineralogical content. In fact, LKG lists it as containing a systematic mineralogy.

REFERENCES: BL: [956.c.8.]. • DSB: 12, 184. • Leonard's *Taschenbuch*: 5, p. 329 [review]. • LKG: XII 184. • NUC: 722, 85 [NE 0169803].

ESTNER, Franz Joseph Anton. (BORN: Schillingsfürst, Hohenlohe, Germany, 7 June 1739; DIED: Vienna, Austria, 1803?) *Austrian theologian & mineralogist.*

Estner was an abbot and mineralogist in Vienna. He organized the collection of Hungarian Count Rudolph

von Wrba [1761-1823] and built his own fine collection of minerals.

REFERENCES: DBA: I 295, 270-272; II 342, 74. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, cols. 685-6. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 169.

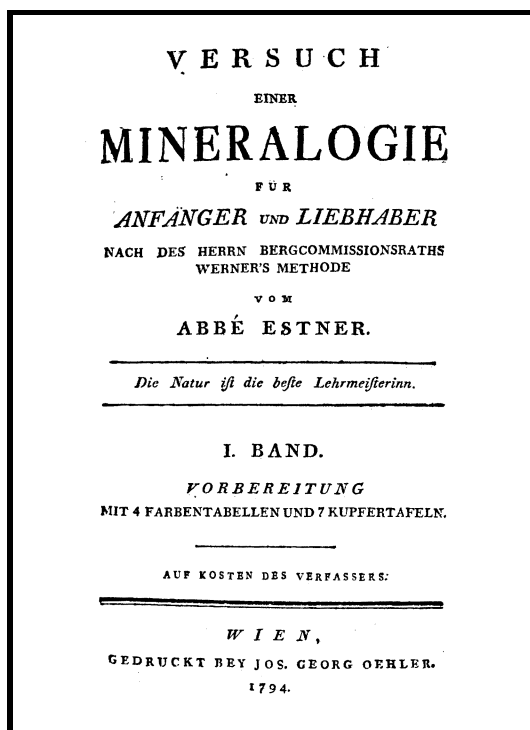
1581. — German, 1790.

Freymüthige Gedanken über Herrn Inspector Werners Verbesserungen in der Mineralogie, nebst einigen Bemerkungen über Herrn Assessor Karstens Beschreibung des vom. sel. Leske hinterlassenen Mineral-Cabinetts. Von Abbé Estner. Wein, Gedruckt für C.F. Wappler bey I. Alberti, 1790.

8°: 64 p.

RARE. A commentary describing the benefits of Werner's mineralogical theories, together with a commentary concerning D.L.G. KARSTEN's catalog of the Leske mineral collection.

REFERENCES: *Allgemeine Literatur-Zeitung*: 3 (1792), 125 [review]. • BL: [445.a.39.(1.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 268. • LKG: XII 193. • Roller & Goodman, *Catalogue*, 1976: 1, 368.



VERSUCH EINER MINERALOGIE, 1794

1582. — German, 1794-1804.

Versuch | Einer | Mineralogie | Für | Anfänger und
Liebhaber | Nach Des Herrn Bergcommissionsraths
| Werner's Methode | vom | Abbé Estner. | [rule] |
Die Natur ist die beste Lehrmeisterinn. | [rule] | I.
Band. | Vorbereitung | Mit 4 Farbentabellen Und

7 Kupfertafeln. | [rule] | Auf Kosten Des Verfassers.
| [double rule] | Wein, | Gedruckt Bey Jos. Georg
Oehler. | 1794.

[TITLE PAGE OF VOLUME 2, PART, 1 READS:]

Versuch | ... | II. Band, | Erste Abtheilung
| Zirkon- Diamantspath- Strontianit- Und |
Kieselgeschlecht; | Nebst Bemerkung Der In
Den Vorzüglich- | sten Wiener Kabinetten Sich
Auszeich- | Neneden Mineralien Und Fossilien. |
[rule] | Auf kosten des verfassers. | [double rule] |
Wien, | Gedr. In Der Öhlerischen Buchdruckerey.
| 1795.

[TITLE PAGE OF VOLUME 2, PART 2, READS:]

Versuch | ... | II. Band. | Zweyte Abtheilung
| Thon - Talk - Kalk - Barytgeschlecht |
Und Sidneyerde; | Nebst Bermerkung Der In
Den Vorzüglich- | sten Wiener-Kabinetten Sich
Auszeich- | nenden Mineralien Und Fossilien. |
[rule] | Auf Kosten Des Verfassers. | [double rule] |
Wien, | Gedr. Bey Mathias Andreas Schmidt, |
Kais. König. Hofbuchdrucker. | 1797.

[TITLE PAGE OF VOLUME 3, PART 1, READS:]

Versuch | ... | III. Band. | Erste Abtheilung.
| Salze, Brennlliche Substanzen, Me- | talle,
Platin - Gold - Quecksilber- | Silber - Und
Kupfergeschlecht. | ... | [1799].

[TITLE PAGE OF VOLUME 3, PART 2, READS:]

Versuch | ... | III. Band. | Zweyte Und Letzte
Abtheilung. | Eisen, Bley, Zinn, Zink, Spiesglanz,
| Kobalt, Braunsteinerz, Wasserbley, | Arsenick,
Urangeschlecht, Titan- | Erz Tellurerz. | ... | Wien,
| Bey Christ. Fried. Wappler U. Beck. | 1804.

3 vols. [VOL 1: 1794] 8°: *2 A-2Q⁸ 2R⁶; 320ℓ.;
[4], [1]-635, [1] p. [VOL 2, pt. 1: 1795] 8°: π⁸ B-KK⁸
Ll⁴; 268ℓ.; [1]-535, [1] p. [VOL 2, pt. 2: 1797] 8°:)(7
Mm-Fff⁸ Gggg¹; 287ℓ.; [i]-xiv, [537]-1193, [1] p. [VOL 3,
pt. 1: 1799] 8°: π² A-Q⁸ R⁶; 320ℓ.; [4], [1]-635, [1] p.
[VOL 3, pt. 2: 1804] 8°: A-Q⁸ R⁶; 134ℓ.; [1]-268 p. PAGE
SIZE: 198 x 122 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [1],
Sectional title page, "Mineralogie | vom | Abbé Estner.
| [rule] | Erster Band."; [2], "N.B."; [3]-[8], Dedication
to Grafen Rudolph von Wrba.; [9]-14, "Vorrede"—dated
1 January 1794.; [15]-293, Text.; [1 pg], Blank.; [1 pg],
Sectional title page, "Erklärung | Der | Farbentabellen |
Und | Kupfertafeln | zum ersten Bande des Versuches einer
| Mineralogie | vom Abbé Estner."; [1 pg], Blank.; [8 pgs],
"Erklärung Der Farbentabellen."; [5 pgs], "Erklärung |
der besondern Gestalten in den Kupfertafeln."; [1 pg],
"Nachricht für den Buchbinder."; [At end], 11 folding
plates.

[Vol 2, pt. 1] [1-2], [Half title page, verso blank,
missing from copy examined]; [3-4], Title page, verso
blank.; [5]-14, "Vorbericht."; 15-16, "Anmerkung"—dated
2 January 1795.; 17-22, "Zusätze | Zu Dem Ersten Band.";
23-535, Text.; [1 pg], "Verbesserungen."

[Vol 2, pt. 2] [i-ii], Title page, verso blank.; [iii]-xiv,
"Vorbericht"—dated 30 November 1796.; [537]-1188, Text.;
1189-1193, "Anhang."; [1 pg], "Verbesserungen."

[Vol 3, pt. 1] [2 pgs], Title page, verso blank.; [2 pgs],
"Vorbericht"—dated 2 April 1799.; [1]-16, "Verbesserungen
| Und | Zusätze."; 17-635, Text.; [1 pg], Blank.

[Vol 3, pt. 2] [1-2], Title page, verso blank.; [3]-
242, Text.; 243-268, "Register | Über Alle | Bände Und
Abtheilungen."

VERY RARE. Designed for the beginner and lover of
minerals, Estner's work explains Werner's theories. The
author was a devout disciple of Werner doctrine and this
exposition of his theories is one of the most extensive
and rarest of the treatments. Estner relied upon the
mineral collections of Vienna for source material in his
mineral descriptions. According to the title pages of the
various volumes, he also paid the costs of printing and
hence the extreme difficulty in obtaining copies of this
work.

REFERENCES: *Allgemeine Literatur-Zeitung*: (April,
1795), 212 & (February, 1797), 297 [reviews]. • BL:
[741.bb.10.]. • Dana's 7th (Bibliography): 70. • Gatterer,
Mineralogischen Literatur, 1798-9: 1, 30. • LKG: XII 136. •
Neue Allgemeine deutsche Bibliothek: 24, no. 2, 465 [review].
• Roller & Goodman, *Catalogue*, 1976: 1, 368. • Ward &
Carozzi, *Geology Emerging*, 1984: no. 757.

EVERS, Heinrich. (BORN: ; DIED: Hamburg,
Germany, c1768) *German merchant*.

Evers was a trader in Hamburg. He accumulated
what was called a 'handsome' natural history collection
including minerals.

1583. — German, 1768 [Sale catalog].

Verzeichniß einer sehr ansehnlichen Sammlung
von Naturalien aus allen Reichen der Natur,
welche nach dem seligen Ableben ihres ehemaligen
Besitzers Herrn Heinrich Evers ... entweder
unzertrennt oder durch eine öffentliche Auction
am 7ten März und folgende Tage 1768 öffentlich
an die Meistbietenden verkauft werden sollen ...
Wöniger. Hamburg, gedruckt bey Johann Lucas
Conrad König, 1767.

8°: xii, 128 p., frontispiece (portrait).

RARE. Auction sale catalog of Evers' comprehen-
sive natural history collections, including a substantial
quantity of mineralogical specimens. The sale began on
March 7th, 1768 and continued on the following days
until all lots were sold. The compiler of the catalog was
Wöniger.

REFERENCES: Cobres, *Deliciae Cobresianae*, 1782. •
Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 264. •
Wilson, *History of Mineral Collecting*, 1994: 169 & 211.

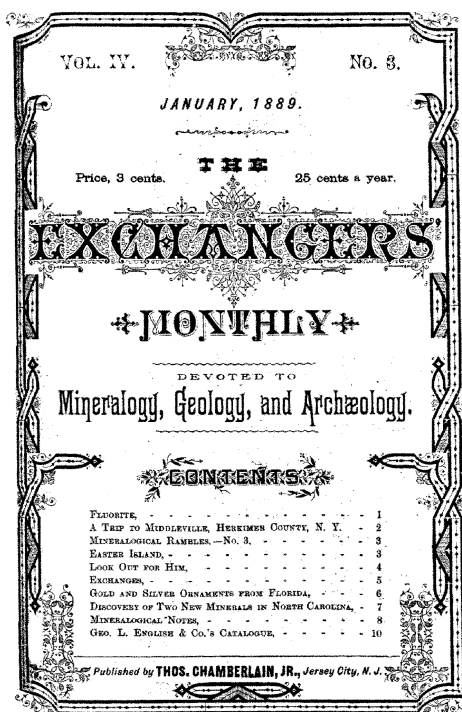
EXCHANGERS' MONTHLY.

1584. — English, 1885-90 [Periodical].

The | Exchangers' Monthly | Devoted to |
Mineralogy, Geology, and Archæology. | ... |
Published by Thos. Chamberlain, Jr., Jersey City,
N.J., 1885-1890.

Vol. 1, no. 1 (November 1885)-vol. 5, no. 10
(October 1890).

VERY RARE. Despite the title's broader scope,
most of the articles of this periodical were mineralogical
in content, reflecting the editor Arthur Chamberlain's



EXCHANGERS' MONTHLY, 1885

own collecting preferences. The first number of *The Exchangers' Monthly* appeared in November, 1885, the subscription price being twenty-five cents per year. It was a modest little publication, trim in appearance that lasted for five years. The name of the magazine was then changed in November, 1890, to *The Mineralogists' Monthly* [which see], and the price advanced to fifty cents per year.

Arthur C. Chamberlain. (BORN: ; DIED: after 1916) *American publisher.* Chamberlain was the owner of The Chamberlain Printing Company of Jersey City, New Jersey, which operated from the 1890s to at least 1909. He was an enthusiastic mineral collector, and involved in the editing and publishing of several American magazines devoted to the hobby.

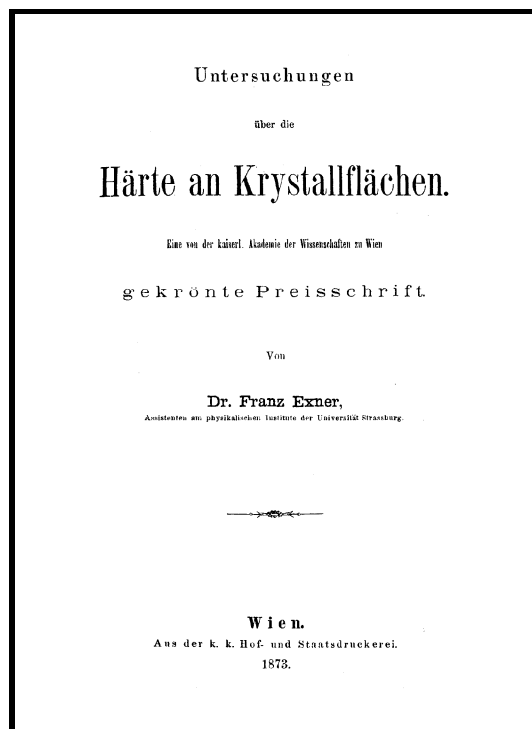
REFERENCES: BL: [no copy listed]. • Bolton, *Catalogue of Periodicals*, 1897. • NUC. • *Union List of Serials.* (Chamberlain) *Mineral Collector*: 15 (1909), no. 12, 177.

EXNER, Franz Serafin. (BORN: Vienna, Austria, 24 March 1849; DIED: Vienna, Austria, 15 November 1926) *Austrian physicist.*

Educated at the University of Vienna (Ph.D., 1871), Exner was a founder of modern experimental and theoretical research in atmospheric electricity. He studied the contact potentials between heterogeneous substances and developed a theory to explain them. He wrote a highly esteemed textbook on the spectra of the elements. Exner was also an early supporter of Helmholtz's three component theory of color.

REFERENCES: *Almanach der Akademie der Wissenschaften in Wien*: 77 (1927), 179-84. • DBA: II G 9, 96-96. • Internet search. • NDB: 4, 699. • *Österreich Biographisches Lexikon*: 1, 275. • WBI.

1585. — German, 1873.



UNTERSUCHUNGEN ÜBER DIE HÄRTE, 1873

Untersuchungen | über die | Härte an Krystallflächen. | Eine von der kaiserl. Akademie der Wissenschaften zu Wien | gekrönte Preisschrift. | Von | Dr. Franz Exner, | Assistenten am physikalischen Institute der Universität Strassburg. | [ornate rule] | Wein. | Aus der k.k. Hof- und Staatsdruckerei. | 1873.

8°: [2], [1]-166 p., 68 plates.

VERY SCARCE. Hardness as it applies to minerals was a subject thoroughly investigated by Exner in his important *Untersuchungen über die Härte an Krystallflächen*. After providing a short historical introduction to previous investigations into the hardness of minerals, Exner attempts to place the study on firm scientific foundations. Hardness had previously been a physical characteristic that had been a relative measure between two or more mineral species. Now however, Exner described the forms of hardness across the faces of many crystals in a series of curves of hardness. He obtained the measurements by determining the least amount of weight required to scratch a crystalline surface in different directions for each 10° or 15° from 0° to 180°, as determined by a sclerometer (an instrument used to measure hardness). These directions are laid out as radii from the center, and the length of each is made proportional to the weight fixed by experiment. These points are then connected, and a specific hardness diagram for the mineral determined.

REFERENCES: BL: [8716.dd.1.]. • NUC: ??, ??.

EYSSVOGEL, Friderich Gottlob.

1586. — German, 1766.

Neu-eröffnetes Magazin, bestehend in einer Versammlung allerhand raren Künsten und besondern Wissenschaften durch welche sich alle Arten der Künstler sehr grossen Nutzen schaffen können, aus denen bis anhero geheimgehaltenen Manuscriptis mit bes. Bamberg, Frankfurt, Leipzig, Bey Tobias Göobhardt, 1766.

2 vols. VERY SCARCE.

REFERENCES: Hoover Collection: no. 289.

FABBRONI, Giovanni Valentino Mattia. (BORN: 1752; DIED: 1822) *Italian scientist, statesman & scholar.*

Fabbroni in 1768 became assistant to Felice Fontana in the Museum of Physics and Natural Sciences of the Grand Duke of Tuscany, Florence, 1780 became assistant director, travelled and lived in Paris and London 1776-1778, 1803 became director of the mint (corresponded with Guyton de Morveau on questions relating to coinage), published works on economics, technology, natural history, chemistry and physics.

REFERENCES: ABI: I 387, 124-148; II 223, 266-268. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • DSB: 4, 503. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Parenti, *Aggiunte al Dizionario*, 1952-60. • Poggendorff: 1, cols. 709-10. • WBI.

1587. — Italian, 1790.

Dell' Antracite | o | Carbone di Cava | detto volgarmente | Carbon Fossile | compilazione fatta | per ordine del Governo. | [rule] | [...2 lines of quotation...] | [rule] | [double rule] | [double rule] | In Firenze MDCCXC. | [double rule] | Per Gaetano Cambiagi Stamp. Imperiale | Con Approvazione.

8°: xxv, 358, [1] p., 10 folding plates, one folding map, one table (facing p. 244). The plates show geological formations, mines and equipment. Tav 9 shows the Boulton and Watt steam engine.

VERY SCARCE. The work is a compendium of information concerning coal including chemical and mineralogical details. The analyses of Italian coals, by distillation, were by the author. Contains a bibliography of various works on coal "Biblioteca antracologica" on pages 347-358.

REFERENCES: Cole, *Chemical Literature*, 1988: no. 424. • Hoover Collection: no. 290. • LKG: XVI 419. • NUC: [NF 0007291].

FABER, Anton.

1588. — Latin, 1824.

Principia Juris metallici Hungarici. Olim a se edita, additamentis locupletavit, et nova Forma donavit Antonius Faber ... Pressburg (Posonii), C. Snischek, 1824.

[12], [3]-232 p., one folded engraved map of this hungarian area.

VERY SCARCE. = Rare not in Ward and Carozzi. REFERENCES: Papp, *Magyar Topografikus*, 2002.

FABRICI, Georg Andrea.

1589. — Latin, 1631 [Dissertation].

[Greek text] | Exercitationum Physicarum | Octava, | De | Fossilibus. | Qvæ est | Metallo- | logia, | In Gymnasio Mulhusino | Proposita | Præsides | M. Georgio-Andrea Fabrico, | Poeta L. Cæs. Gymnasiarcha. | Respondente | Georgio Jungio Saltzensi. | Hab. Disputatio ad d. 10. Decembr. in Auditorio nova. | [ornament] | Mulhusi, | Typis Johan. Stangii, Anno M. DC. XXXI.

4°: A-B⁴; 8 ℓ .; [16] p.

CONTENTS: [1 pg], Title page.; [1 pg], Dedication.; [14 pgs], Text.

VERY SCARCE. A dissertation on stones, minerals, and metals.

REFERENCES: VD17: 39:137701V.



FABRICIUS

FABRICIUS, Georg. (BORN: Chemnitz, Hungary, 23 April 1516; DIED: 13 July 1571) *German philologist & Latin poet.*

Fabricius was president of the College of Meissen from 1553 to 1571. Among his writings are *Description of Rome* (1550) and *Res Germaniæ et Saxonæ Memorabiles* (1609).

REFERENCES: ADB: 6, 510. • Baumgarten-Crusius, *Programma de Georg Fabricii Vita*, 1839. • DBA: I 303, 95-97; 303, 101-104. • *Encyclopaedia Britannica*, 11th edition. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • *Nouvelle Biographie Générale* (Hoefer): 16, col. 958. • NDB: 4, 734-5 [by H. Schönebaum]. • Poggendorff: 1, col. 711. • Sarjeant, *Geologists*, 1980: 2, 978. • Thomas, *Dictionary of Biography*, 1884: 886. • WBI.

1590. — Latin, 1565/6.

De Metallicis | Rebus Ac | Nominibus Ob= | Servationes Variæ | & eruditæ, ex schedis Georgij Fabri- | cij: quibus ea potissimum ex- | plicantur, quæ Georgius | Agricola præ- | terijt. | [ornament] | Tigvri M.D.LXV.

8°: a-d⁸ e²; 34ℓ.; no pagination. PAGE SIZE: 165 x 100 mm.

CONTENTS: alr, Title page.; alv, Table of contents.; a2r-a3r, Epistola, dated 1566.; a3v-e2v, Text.

RARE. This succinct treatise, which cites many classical sources, provides descriptions of the noble and base metals. It consists of eleven chapters that describe gold, silver, lead, copper, tin as well as various alloys and oxides. The debt owed by the author to Agricola is noted on the title page and in the introductory letter. This letter written by Johannes Kentmann is dated 1566, although the title page is dated 1565, and together with the separate foliation provides evidence that this work was issued separately, as well as included in Conrad Gesner's *De Omni Rerum Fossilium* (Tigvri, 1565).

German transl., 1913: Contained in: J.M. Eder, *Quellenschriften zu den frühesten Anfängen der Photographie bis zum XVIII. Jahrhundert herausgegeben und mit Erläuterungen versehen*. Halle an der Saale, Wilhelm Knapp, 1913. 4°: [4], 187 p., 7 plates. Printed stiff wrappers.

Scarce. Within this survey of early writings concerning photography from the middle of the 16th century into the latter part of the 18th century, there is a translation of a portion of Fabricius' work, with an explanation by Eder as to the significance of the information to the later invention of photography. The text is presented in the original Latin of Fabricius along with a German translation. There is also a reproduction of title page of the *De Metallicis Rebus*.

REFERENCES: Adams, *Cambridge Books*, 1967: G-522/[3]. • Dana's 7th (Bibliography): 70. • Hoover Collection: no. 347/[3]. • LKG: III 23. • Osler, *Bibliotheca Osleriana*, 1969: no. 646/[3]. • Sinkankas, *Gemology Bibliography*, 1993: no. 2366/3. • Sparrow, *Milestones of Science*, 1972: no. 82/[3]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 906/[3] & 767. • Wellich, H., "Conrad Gessner: a bio-bibliography," *Journal of the Society for the Bibliography of Natural History*, 7 (1975), pt. 2, 151-247, 4 text figs: [See A-63/3].

1591. — Latin, 1913.

... Eruditæ, ex schedis Georgij Fabricij: quibus ea potissimum explicantur, quæ Georgius Agricola præterijt. Contained in: J.M. Eder, *Quellenschriften zu den frühesten Anfängen der Photographie bis zum XVIII. Jahrhundert herausgegeben und mit Erläuterungen versehen*. Halle an der Saale, Wilhelm Knapp, 1913.

4°: [2], 187 p., 7 plates. Printed stiff wrappers.

VERY SCARCE. First German edition. Contains a facsimile reproduction of the first edition dated 1565, followed by a German translation.

A survey of early writings concerning photography from the middle of the 16th-century into the latter part of the 18th-century with explanations by the author as to their significance to the later "invention" of photography. Presented in the original Latin of the authors with German translation provided; contains reproductions of title pages of the works from which extracts have been taken.

FABRICIUS, Thomas Balthasar. (BORN: 1774; DIED: 1851) *Danish physician.*

Fabricius, a native of Copenhagen, studied at Kiel from which he graduated in 1802. He opened a medical practice in Kiel.

REFERENCES: DBA: I 304, 198-203. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 466. • WBI.

1592. — German, 1810.

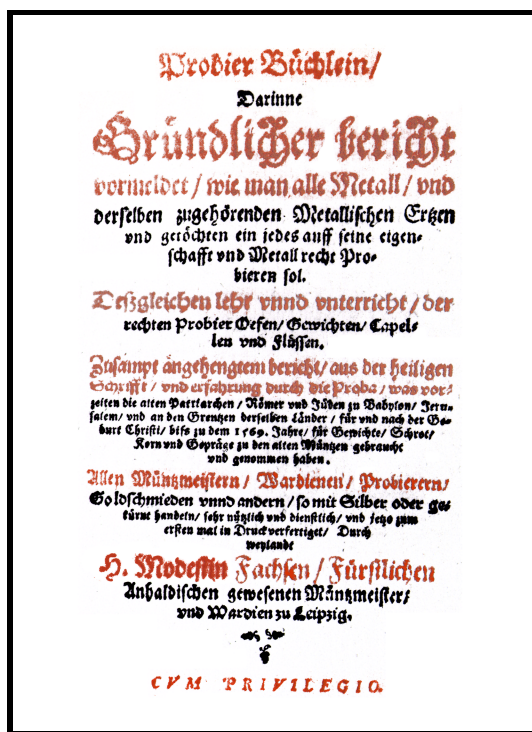
Anleitung | zur | chemischen Analyse | unorganischer Naturkörper. | [rule] | Von | Dr. T.B. Fabricius. | [rule] | Kiel, | In der academischen Buchhandlung. | 1810.

8°: π³ 1-11⁸ 12⁴ 13³; 100ℓ.; [i]-vi, [1]-194 p. PAGE SIZE: 180 x 120 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, Introduction.; [1]-194, Text.

VERY SCARCE. This introductory work on the chemical analysis of naturally occurring inorganic substances is based on generally known procedures, with no new material added. Many of the substances analyzed are mineralogical in nature.

REFERENCES: BL: [973.a.21.(4.)]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899: 159. • Cole, *Chemical Literature*, 1988: no. 430. • LKG: XI 32. • NUC: [0006842]. • Szabadvary, *History of Analytical Chemistry*, 1966: p. 152.



PROBIER BÜCHLEIN, 1595

FACHS, Modestinus. *German master of the mint.*

REFERENCES: ADB: I 304, 367-370. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • WBI.

1593. — German, 1595 [First edition].

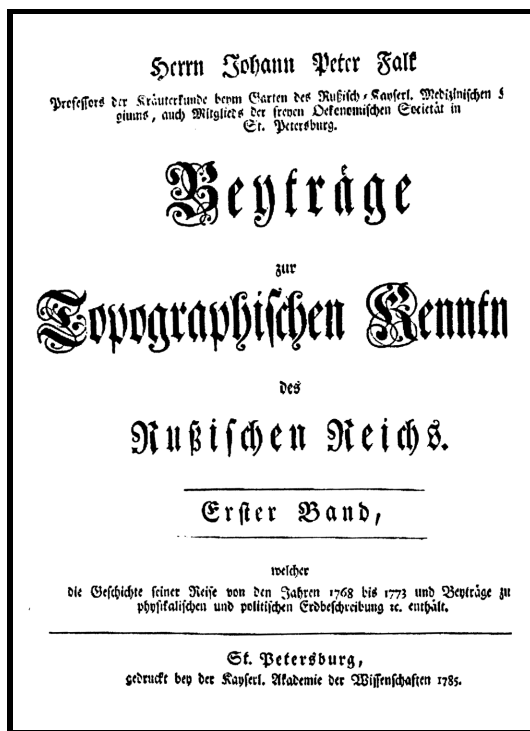
[In red:] Prober Büchlein/ | [in black:] Darinne | [in red:] Gründlicher bericht | vormeldet/ wie man alle Metall/ vnd | [in black:] derselben zugehörenden Metallischen Ertzen | vnd getöchten ein jedes auff seine eigen= | schafft vnd Metall recht Pro= | bieren sol. | [in red:] Deszgleichen lehr vnnd vnterricht/ der | [in black:] rechten Prober Oefen/ Gewichten/ Capel= | len vnd Flüssen. | [in red:] Zusamt angehengtem bericht/ aus der heiligen | Schrift/ vnd erfahrung durch die Proba/ was vor= | [in black:] zeiten die alten Patriarchen/ Römer vnd Jüden zu Babylon/ Jeru= | salem/ vnd an den Grentzen derselben Länder/ für vnd nach der Ge= | burt Christi/ bis zu dem 1569. Jahre/ für Gewichte/ Schrot/ | Korn vnd Gepräge zu den alten Müntzen gebraucht | vnd genommen haben. | [in red:] Allen Muntzmeistern/ Wardienen/ Probierern/ | [in black:] Goldschmieden vnnd andern/ so mit Silber oder ge= | bürnt handeln/ sehr nützlich vnd diestlich/ vnd jetzo zum | ersten mal in Druckverfertiget/ Durch | weylende | [in red:] H. Modestin Fachsen/ Fürstlichen | [in black:] Anhaltischen gewesenen Muntzmeister; | vnd Wardien zu Leipzig. | [ornament] | [in red:] Cvm Privilegio.

8°: a⁸ b⁴ A-P⁸; 132ℓ.; xvii, v, 236, ix p., one folding plate, woodcut initials, ornaments and tail-pieces. Title page printed in red and black. Gothic type. PAGE SIZE: 152 x 95 mm.

VERY RARE. This first edition is not cited in many of the standard bibliographies, although Ferguson knew of its existence and Darmstaedter gives a good description. The preface to the work is dated 1567 and was published by his son Louis Wolfgang Fachs. Incredibly, the work suggests that when tin and lead are heated they increase in weight. It was not until Lavoisier demonstrated this fact in 1772 that it was accepted by the scientific community, but here Fachs clearly describes weight increase of metals during calcination. As the master assayer of the mint for the Prince of Anhalt, Fachs devotes large sections of his text to describing the testing, refining and assaying of gold and silver, while another portion describes managerial aspects of the mint's operation.

Other editions: The British Library has editions of 1669, 1678 (7th ed., Leipzig, Groß, 1678. [22], 173 p., [10], 49, 142 p., one folding table) and 1689 (Leipzig, Gedruckt im Jahr 1689. a⁸-b⁸ c⁷; 23ℓ.; [2] 3-39, [7] p.). Ferguson describes an edition of Leipzig, 1622 and notices editions published in Leipzig of 1636, 1671 and 1680 and an Amsterdam edition of 1669. Clearly a popular and much reprinted work.

REFERENCES: BL. • Darmstädter, *Berg-Büchlein*, 1926: pp. 95-6. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 261. • *Freilich Sale Catalog*: no. 180 [title page reproduced]. • Partington, *History of Chemistry*, 1961-70: 2, 67-8. • Wellcome Catalog (Books): 1, no. 2136.



BEYTRÄGE, 1785

FALCK, Johan Peter. (BORN: 1733?; DIED: March 1774) *Swedish naturalist.*

1594. — German, 1785-6.

Herrn Johann Peter Falk | [...3 lines of titles and memberships...] | Beyträge | zur | Topographischen Kenntniß | des | Rußischen Reichs. | [rule] | Erster Band, | [rule] | welcher | die Geschichte seiner Reise von den Jahren 1768 bis 1773 und Beyträge zu | physikalischen und politischen Erdbeschreibung &c. enthält. | [rule] | St. Petersburg, | gedruckt bey der Kayserl. Akademie der Wissenschaften, 1785.

3 vols. [VOL 1: 1785] 4°: viii, xii, 402 p. [VOL 2: 1785] 4°: vi, 282 p. [VOL 3: 1786] 4°: iv, 283584, xxxvi p., 2 folding engraved maps, coloured in outline, 44 engraved plates (many folding).

VERY SCARCE. This work was compiled and edited by JOHANN GEORG GEORGI from Falck's notes after his suicide in 1774. Originally the work was planned to be published in two volumes but, owing to an increase in the amount of material the second volume was divided into two. Falck was a disciple of Linnaeus and plans were made for him to accompany Forsskål to Arabia and in Forsskål's company he arrived in Copenhagen in 1760, but his services were not required. In 1763 plans were made for him to gain employment in St. Petersburg as head of the natural history collection of the Russian State Councilor Kruse. In 1768 an expedition to Eastern Russia and Siberia was arranged,

FALLOPPIO

in which Falck was included. The expedition traveled into Siberia via Astrakhan and Orenburg via Kolyvan and Tomsk almost reaching the Mongolian border in 1772, but Falck was then ordered to return to St. Petersburg. All along he had been collecting material. For a short time he accompanied PETR SIMON PALLAS and Georgi in their travels. Having made it to Kazan Falck committed suicide in March, 1774. A decade later Georgi edited Falck's diaries and note into the *Beyträge*.

The work begins with Falcks summary account of the journey followed by a geographical description of scenery and life in the areas covered in Russia and Siberia, a map, hydrological and mineralogical observations, lists of plants arranged according to the sexual system, an extensive Russian-Siberian fauna and an account of various peoples encountered. Of particular value is Falcks elaborate description of the South-Russian steppe. Falcks *Beyträge* was a distinguished scientific achievement and a fitting monument to its unfortunate author. The contents of the volumes are as follows: 1. History of the trip from 1768 to 1773 and an examination of the physical and political geography of the regions transversed. 2. Describes the various types of water, rocks, minerals, fossils, and plants encountered. It includes several illustrations. 3. Deals with the fauna and various Asian ethnic groups encountered. It also contains an index to the entire work and illustrations of animals, people and tools.

REFERENCES: Anker, *Bird Books and Bird Art*, 1938: 140. • BL: [149.d.15.]. • LKG: XIV 758. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 2808.

FALCONE, Scipione.

1595. — Italian, 1623.

Discorso Naturale delle Cause, et Effetti Cavasti nell'Incendio del Monte Vesevo con Relatione del Tutto ... Napoli, Appresso O. Beltrano, 1632.

4^o: [42] p. A discussion of the nature of Vesuvius, including the cause of eruptions and the geology and mineralogy of the cone. VERY SCARCE.

REFERENCES: LKG: XIV 574*.

FALLOPPIO, Gabrielle. (BORN: Modena, Italy, 1523; DIED: Padua, Italy, 9 October 1562) *Italian physician & naturalist.*

Falloppio was one of the most important physicians of the 16th century. He was born to a noble but very poor family, and it was only through great hardship that an education was obtained. He studied medicine at Ferrara, and after taking his degree he worked at various medical schools before becoming professor of anatomy at Ferrara, in 1548. The next year he went to the Pisa, the most important university in Italy. In 1551 Falloppio was invited to occupy the chair of anatomy and surgery at Padua. Though he died at an early age, he had made his mark on anatomy. He studied the organs of generation in both sexes, and his description of the canal or tube which leads from the ovary to the uterus attached his name to the structure (Fallopian tubes). He published only one work dealing with anatomy during his lifetime. All other books attributed to him were published from his manuscripts after his death by his devoted students.



FALLOPPIO

REFERENCES: ABI: I 391, 4-76; II 227, 31-35. • Capparoni, *Profilii Bio-Bibliografici*, 1928-32: 2, 46-9, portrait. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 417 [1 portrait listed]. • *Dizionario Biografico Italiano*: 44, 479-86 [by G. Belloni Speciale]. • *Encyclopaedia Britannica*, 11th edition. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 262-3. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mieli, *Gli Scienziati Italiani*, 1921: 2, pt. 1, 43-59, portrait. • *Nouvelle Biographie Générale* (Hoefler). • Panetto, M., "Gabriele Falloppio (1523-1562): l'esperienza tra anatomia e Riforma: con nuovi documenti relativi alla ricognizione del 1996," *Studi storici Luigi Simeoni*, 51 (2001), p. 273-306. • Poggendorff: 1, cols. 717-8. • WBL.

1596. — Latin, 1564 [First edition].

Gabrielis | Falloppii Mvntinensis, | Medici, Ac Philosophi | Praestantissimi, | De Medicatis Aqvis, | Atqve De Fossilibvs | Tractatvs Pvlcherrimvs, ac maxime utilis: | ab Andræ Marcolino Fanestri medico | ipsius discipulo amantiſſimo | collectus. | Accessit ejusdem Andree duplex Epistola: in quarum al- | tera ad | lectorem, & huius libri inter reliqua vtilitas, & | docendi modus, ac totius rei, quæ in hoc ipso opere con- | tinetur, summa breuiter explicatur. | Cum indice rerum agis obseruandarum copiosissimo, ac Ca- | pitum omnium, quæ in hoc opusculo tractantur, catalogo: | quem decima octaua pagella indicabit. | Cum [ornament] Priuilegio. | Ex officina Ludouici Auantiij, | In Venetiis, M. D. LXIII.

4^o: a-d⁸ e⁴ A-Y⁸; [36], 176ℓ., title vignette (woodcut of chemical apparatus). PAGE SIZE: 207 x 150 mm.

RARE. Edited by Andreas Marcolini. Published posthumously, the text consists of two lectures delivered at the University of Padua in 1556 and 1557. Much of the book is on geology and mineralogy, where his views on the origin of mountains, and fossils are described. The title woodcut shows chemical apparatus.

Falloppio's lectures on mineral waters given in

Padua in 1556 were published posthumously together with his lecture on minerals given in 1557. Falloppio's work criticizes Savonarola and others for their statements about minerals found in springs. It pictures a still and a chemical examination of water according to 'modern physicians.' — Partington.

Falloppio's lectures on thermal and medicinal springs and also on 'fossils', i.e. both paleontological remains and minerals and earths. These essays were collected and edited for publication after Falloppio's death in 1562 by his pupil Andrea Marcolino. The emphasis of this work is largely geological; the origin of springs and fountains, the nature of subterranean fire and generation of heat within the earth, and the vexing question of the origin of fossils. 'Falloppio, as one of the great line of Paduan anatomists, would have been well aware of organic resemblances in whatever fossils he was familiar with; yet he felt that their occurrence on hilltops far from the sea made their organic origin unacceptable. It would have entailed changes in geography that were literally incredible, even with an Aristotelian view of continuous terrestrial change; and an explanation in terms of spontaneous generation therefore seemed preferable' (M.J.S. Rudwick, *The meaning of fossils*). Falloppio also describes many individual springs, their geology, the nature of their waters and their medicinal virtues. He performed analyses to determine the mineral contents of various springs.

It was published after his death, based on the notes that the famous typographer Marcolini had taken at his lessons in Padua university. It deals with the origin of springs and fossils, thermal baths and their properties, geology, and the medical virtues of various spring waters. He denies that thermal baths would help changing sex, and prescribes not to bathe in leap years, criticising Montagnana and Savonarola. Thorndike, VI, 209-Ward & Carozzi, 772-Durling, 1431-Duveen, Balneology, 512-Heirs of Hippocrates, 336.

Another issue, 1564: Venetiis, apud Ludouicum Avantium, 1564.

REFERENCES: Adams, *Birth and Development*, 1938: pp. 91 & 255. • Adams, *Cambridge Books*, 1967: F-137 & F-138. • Beekman, *Systematische Mineralogie*, 1906: p. 9 [mention only]. • BL: [987.i.1.(1.)]. • Cushing: no. F-22. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 41. • Heirs of Hippocrates, 1990: no. 336. • Hsu, K.-T., "Gabriele Falloppio's 'De medicatis aquis' as a major source of Nicolaus Steno's earliest geological writing—'Dissertatio physica de thermis,'" *Philosophy and the History of Science: A Taiwanese Journal*, 2 (1993), no. 2, 77-104. • NLM 16th Century Books (Durling): no. 1431. • NUC: 166, 295 [NF 0023772]. • Osler, *Bibliotheca Osleriana*, 1969: no. 2563. • Partington, *History of Chemistry*, 1961-70: 1, 100-1. • Thorndike, *History of Magic*, 1923-58: 5, 548-9. • Wallerius, *Brevis Introductio*, 1779: p. 23. • Ward & Carozzi, *Geology Emerging*, 1984: no. 772. • Wellcome Catalog (Books): no. 2150.

1597. 2nd edition, 1569: Gabrielis | Falloppii Mvtinensis, | Medici, Ac Philosophi | Praestantissimi, | De Medicatis Aquis | Atque De Fossilibus | Tractatus Pvlcherrimus, | ac maxime utilis; ab Andræ Marcolino Fanestri | medico ipsius discipulo amantissi- | mo collectus. | Accessit ejusdem Andree duplex Epistola: in quarum altera ad | lectorem, & huius libri inter reliqua utilitas, & docendi

GABRIELIS

FALLOPPII MVTINENSIS,
MEDICI, AC PHILOSOPHI
PRAESTANTISSIMI,

DE MEDICATIS AQVIS ATQVE DE FOSSILIBVS

TRACTATUS PVLCHERRIMVS,
ac maxime utilis; ab Andræ Marcolino Fanestri
medico ipsius discipulo amantissi-
mo collectus.

Accessit eiusdem Andree duplex Epistola: in quarum altera ad
lectorem, & huius libri inter reliqua utilitas, & docendi mo-
dus, ac totius rei, quæ in hoc ipso opere continetur, summa
breuiter explicatur.

Cum indice rerum magis obseruandarum copiosissimo, ac Capitum
omnium, quæ in hoc opusculo tractantur, catalogo: quem deci-
ma octaua pagella indicabit.

Cum Priuilegio.



V E N E T I I S,

Ex officina Ludouici Auantij.

M D L X I X.

MEDICATIS AQUIS ATQUE DE FOSSILIBVS, 1569

mo- | dus, ac totius rei, quæ in hoc ipso opere continetur, summa | breuiter explicatur. | Cum indice rerum agis obseruandarum copiosissimo, ac Capitum | omnium, quæ in hoc opusculo tractantur, catalogo: quem deci- | ma octaua pagella indicabit. | Cum Priuilegio. | [ornament] | Venetiis, | Ex officina Ludouici Auantij, M D LXIX.

4°: a-d⁸ e⁴ A-Y⁸; [36], 176^l., title vignette.

VERY SCARCE. Edited by Andræ Marcolinus. A reprint of the first edition, with a new title page.

REFERENCES: BL: [1171.h.1.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 41. • LKG: III 21. • NUC: 166, 295 [NF 0023773]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 773. • Wellcome Catalog (Books): 1, no. 2151.

FALSAN, Albert.

1598. — French, 1863.

Notice sur la géologie et la minéralogie du Canton d'Hyères. Par M.A. Falsan. Lyon, Barret, 1863.

8°: [2] 60 p., illus., one folding plate, one folding map. "Présentée à la Société impériale dagriculture, d'histoire naturelle et des arts utiles de Lyon, dans sa séance du 17 juillet 1863."

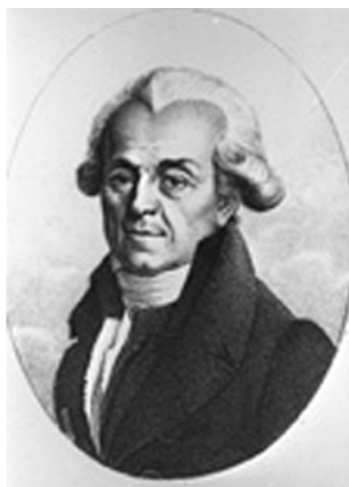
VERY SCARCE. Topographical work on the geology and mineralogy of the Canton of Hyères in France. Continued as: "Des progrès de la Minéralogie et de la Géologie à Lyon et de l'influence de Joseph Fournet sur l'avancement de ces Sciences. Discours de réception à l'Académie des Sciences, Belles-Lettres et Arts de Lyon, lu en séance publique le 23 Decembre 1873," *Mém. Acad. de Lyon*, Classe des Sciences, bf 20 (1873-4), pp. 219-275.

REFERENCES: BL. • NUC. • USGS Library Catalog.

FAUJAS DE SAINT-FOND

FARINATOR, Matthias.

See: **Lumen Animae.**



FAUJAS

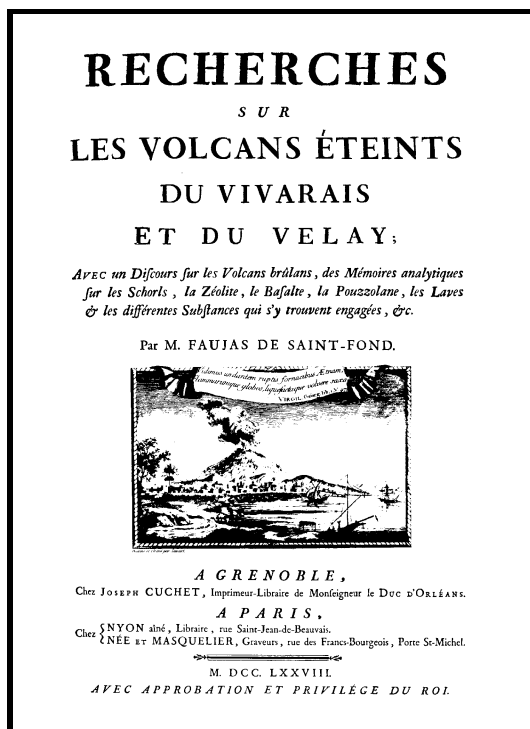
FAUJAS DE SAINT-FOND, Barthélemy. (BORN: Montélimart, France, 17 May 1741; DIED: Saint-Fond, France, 18 July 1819) *French geologist.*

Faujas was a friend of Buffon, through who's influence he obtained an appointment at the Museum of Paris and commissioner of mines. He extensively explored France, England, Germany, Italy, etc. In 1793, he was made professor of geology at the Jardin des Plantes.

REFERENCES: ABF: I 389, 262-298. • *Catalogue of Portraits of Naturalists*: 419 [1 portrait listed]. • Challinor, *Early Progress of British Geology*, 1954 [see part III, 126-9]. • Cleavelly, *World Palaeontological Collections*, 1983: 115. • Drugulin, *Sechstausend Portraits*, 1863: no. 1572. • DSB: 4, 548-9 [by J. Challinor]. • *Encyclopaedia Britannica*, 11th edition. • Ford, T.D., "Barthélemy Faujas de St. Fond," *Bulletin of the Peak District Mines Historical Society*, 2 (1965), 236-40. • Geikie, A., "Memoir of the author" (pp. ??-??), in: Faujas de St. Fond, B., *Voyages*. Translated and edited by A Geikie. Glasgow, 1907. • Lambrecht & Quenstedt, *Catalogus*, 1938: 135. • *Nouvelle Biographie Générale* (Hoefer): 17, 167-71, biblio. • Poggendorff: I, cols. 724-5. • Sarjeant, *Geologists*, 1980: 2, 984-5. • Thomas, *Dictionary of Biography*, 1884: 897. • WBI. • *World Who's Who in Science*: 548.

1599. — French, 1778.

Recherches | sur | Les Volcans Éteints | Du Vivarais | Et Du Velay; | Avec un Discours sur les Volcans brûlans, des Mémoires analytiques | sur les Schorls, la Zéolite, le Basalte, la Pouzzolane, les Laves | & les différentes Substances qui s'y trouvent engagées, &c. | Par M. Faujas De Saint-Fond. | [Large rectangular vignette] | A Grenoble, | Chez Joseph Cuchet, Imprimeur-Libraire de Monseigneur le Duc d'Orléans. | A Paris, | Chez [next two line braced on the left:] Nyon aîné, Libraire, rue Saint-Jean-de-Beauvais. | Née et Masquelier, Graveurs, rue des Franks-Bourgeois,



RESEARCHES, 1778

Porte St-Michel. | [ornate rule] | M. DCC. LXXVIII. | Avec Approbation Et Privilège Du Roi.

2°: [4], xviii, [2], 460, [4] p., one engraved title-vignette, 2 engraved vignettes, 2 engraved initials, 20 engraved plates (one double-page). PAGE SIZE: 420 x 280 mm.

RARE. While exploring the hilly region of Vivarais and Velay in east-central France, Faujas recognized ancient basalt flows and their associated mineralization; however, there were no active volcanoes in the area. After mineralogically comparing the rocks and minerals found in France with specimens collected near active volcanoes, Faujas presents his conclusions in the *Recherches*, in which he showed decisively the volcanic origin of basalt. Although the neptunists would continue to show contrary evidence, Faujas conclusions were so convincing that it helped crush the thought that basalt formed through sedimentary processes once and for all. The *Recherches* also gives excellent descriptions and illustrations of the extinct volcanoes in France which Zittel says "have scarcely been surpassed in later publications."

REFERENCES: Dana's 7th (Bibliography): 70. • DSB: 4, 548. • *Freilich Sale Catalog*: no. 182. • Hoover Collection: no. 294. • LKG: XIV 369. • Roller & Goodman, *Catalogue*, 1976: 1, 387. • Ward & Carozzi, *Geology Emerging*, 1984: no. 779. • Zittel, *History of Geology*, 1901.

1600. — French, 1778.

Researches sur la puzzolane, sur la théorie de la chaux et sur la cause de la dureté du mortier ... Par

M. Faujas de Saint-Fond ... Grenoble, J. Cuchet, 1778.

8°: x, 125 p. VERY SCARCE.

Supplement, 1780: [see Ward & Carozzi, no. 780]

REFERENCES: LKG: XVI 371. • Roller & Goodman, *Catalogue*, 1976: 1, 387. • Ward & Carozzi, *Geology Emerging*, 1984: no. 777 & 778.

1601. German transl., 1784: Von der Puzzolane und deren nützlichem Gebrauche zu allerhand Arten von Bau-Anlagen. Nebst einigen Anmerkungen und einem Nachtrage des Übersetzers. Aus dem Französischen übersetzt von A.T. Gersdorf. Dresden, ... In der Waltherischen Hochbuchhandlung, 1784

8°: [12], 185 p., illus.

VERY SCARCE. Not in NUC. First German edition, translated by A.T. von Gersdorf from *Recherches sur la Puzzolane* (1778). No information found.

REFERENCES: LKG: XVI 372a.

1602. — French, 1788.

Essai sur l'histoire naturelle des roches de trapp, contenant analyse, variétés de trapps & des roches qui ont pour base cette pierre. Par M. Faujas de Saint-Fond. Paris, 1788.

8°: [4], 159, [1] p.

VERY SCARCE. Concerns petrology and traps in rocks.

REFERENCES: LKG: XVI 446. • Roller & Goodman, *Catalogue*, 1976: 1, 387. • Ward & Carozzi, *Geology Emerging*, 1984: no. 782.

1603. 2nd edition, 1813: Histoire naturelle des roches de trapps, considérée sous les rapports de la géologie et de la minéralogie ... Seconde édition ... Paris: G. Dufour et Cie., 1813.

8°: 92 p., one folded plate. VERY SCARCE.

REFERENCES: LKG: XVI 446.

1604. German transl., 1789: Physikalische Abhandlung über den Trapp. Aus dem Französischen des Herrn Faujas de St Fond ... Strassburg, Verl. der Akad. Buchh., 1789.

8°: [8], 117 p.

VERY SCARCE. First German edition, translated from *Histoire naturelle des roches de trapps* (1788).

REFERENCES: BL: [726.c.15.]. • LKG: XVI 447a.

1605. — French, 1784.

Minéralogie | Des Volcans, | Ou | Description | De toutes les Substances produites ou | rejetées par les Feux souterrains. | Par M. Faujas De Saint-Fond. | [ornament] | A Paris, | Chez Cuchet, rue & Hôtel Serpente, | [double rule] | M. DCC. LXXXIV. | Avec Approbation, & Privilège du Roi.

8°: a7 b2 A-Ii8; 266ℓ.; [i]-xv, 16-18, [1]-511, [1] p., 3 engraved plates (numbered Pl. I-III, the first signed 'Sellier sculp.'). PAGE SIZE: 200 x 126 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vj, Dedication, signed Faujas De Saint-Fond.; [vii]-xiv, "Introduction."; [xv]-16, "Table | Des Chapitres."; [17]-18, "Explication | Des Planches."; [1]-468, Text.; [469]-508, "Table | Des | Matières."; 509-511, "Approbation."; [1 pg], Blank.; [At end], 3 plates.

VERY SCARCE. In his great folio work *Recherches sur les Volcans Éteints* (Paris, 1778) Faujas established once and for all the volcanic origin of basalt. In his *Minéralogie des Volcans* he describes and classifies a variety of basalt and associated minerals from different

MINÉRALOGIE DES VOLCANS, OU DESCRIPTION

DE TOUTES LES SUBSTANCES PRODUITES OU
REJETÉES PAR LES FEUX SOUTERRAINS.

PAR M. FAUJAS DE SAINT-FOND.



A PARIS,
Chez CUCHET, rue & Hôtel Serpente.

M. DCC. LXXXIV.
Avec Approbation, & Privilège du Roi.

MINÉRALOGIE DES VOLCANS, 1784

sources. Of the twenty chapters, the first fifteen contain Faujas' observations and ideas about basalt. In particular, he enumerates and relates the mineral species found in ancient basalt fields to those minerals found near Mt. Ætna and clearly a product of that volcano's geological process. He subsequently draws the correct conclusion that they formed in similar fashion at both locations. This is reinforced at the end of the text with Faujas' description of specimens collected by Dolomieu from Mt. Ætna.

REFERENCES: Dana's 7th (Bibliography): 70. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 318. • Hoover Collection: no. 292. • LKG: XIII 277. • Roller & Goodman, *Catalogue*, 1976: 1, 387. • Ward & Carozzi, *Geology Emerging*, 1984: no. 781.

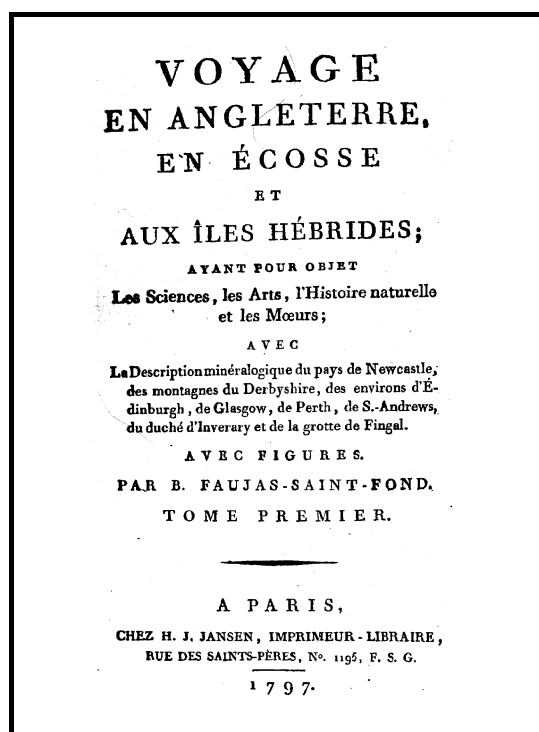
1606. German transl., 1786: Mineralogie | der Vulkane, | oder: | Beschreibung | aller durch die unterirdischen Feueraus= | brüche hervorgebrachter oder ausge= | worfener Substanzen. | vom | Herrn Faujas de Saint-Fond. | Aus dem Französischen übersetzt. | Mit drei Kupfer Tafeln. | [double rule] | Leipzig, | im Schwickertschen Verlage | 1786.

8°: π¹ a⁴ A-X⁸ Y⁴; 176ℓ.; [i]-x, [1]-342 p., 3 plates (folding; crystal diagrams and landscapes).

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vii, "Einleitung."; viii, "Kapitalverzeichnis."; viii-x, "Erklärung der Kupperplatten."; [1]-324, Text.; 325-342, "Register."; [At end], 3 plates.

VERY SCARCE. First German edition, translated from *Minéralogie des volcans* (1784).

REFERENCES: *Allgemeine Deutsche Bibliothek*: 74, no. 2, p. 487. • *Allgemeine Literatur-Zeitung*: 1786., no. 5, p. 84. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 318. • Hoover Collection: no. 293. • LKG: XIII 278a.



VOYAGES EN ANGLETERRE, 1797

1607. — French, 1797 [First edition].

Voyages | En Angleterre, | En Écosse | Et | Aux Îles Hébrides; | Ayant Pour Objet | Les Sciences, les arts, l'Histoire naturelle | et les Mœurs; | Avec | La Description minéralogique du pays de Newcastle, | des montagnes du Derbyshire, des environs d'Édinburgh, de Glasgow, de Perth, de S.-Andrews, | du duché d'Inverary et de la grotte de Fingal. | Avec Figures. | Par B. Faujas-Saint Fond. | Tome Premier. [-Second.] | [tapered rule] | A Paris, | Chez H.J. Jansen, Imprimeur-Libraire, | Rue Des Saints-Pères, N°. 1195, F.S.G. | [short rule] | 1797.

2 vols. [VOL 1] 8°: A-Dd⁸; 215ℓ.; [1]-430, [2] p., 3 folding plates (numbered Pl. I-III; facing pages 224, 342, 412). [VOL 2] 8°: A-Dd⁸ Ee²; 217ℓ.; [1]-434, [2] p., (numbered Pl. I-IV; facing pages 67, 250, 245, 248). PAGE SIZE: 202 x 124 mm.

CONTENTS: [Vol 1] [1-2], Half title page, "Voyages | En Angleterre, | En Écosse | Et | Aux Îles Hébrides. | [rule] | Tome Premier," verso blank.; [3-4], Title page, verso blank.; [5]-414, Text.; [415]-418, "Table | Des Chapitres."; [419]-430, "Table | Des Matières."; [1 pg], "Errata."; [1 pg], Blank.

[Vol 2] [1-2], Half title page, "Voyages | En Angleterre, | En Écosse | Et | Aux Îles Hébrides. | [rule] | Tome Second," verso blank.; [3-4], Title page, verso blank.; [5]-416, Text.; [417]-421, "Table | Des Chapitres."; [422], Blank.; [423]-434, "Table | Des Matières."; [1 pg], "Errata."; [1 pg], Blank.

VERY SCARCE. Describes a trip taken through Great Britain in 1784. "In 1784 Faujas journeyed through England to Scotland; a full account was published in 1797. He narrated entertaining details of his travels and described arts, industries, and customs, but his most important observations were geological. He realized the volcanic nature of the basalt of the Inner Hebrides and paid special attention to the spectacular columnar occurrence on the isle of Staffa, about which his curiosity had been aroused by Banks's account in Thomas Pennant's *Second Tour of Scotland ...* (1774)" (DSB). In volume II there is a description of Faujas' visit to Joseph Black (pp. 267-262). The attractive plates include Fingal's cave and the interior of the house of McNab, the owner of a number of fragments of Ossian's poems. James Mcpherson's so called 'translation' of Ossian's 'Fingal' had been published in 1763 and ecstatically received throughout Europe.

REFERENCES: Challinor, *Early Progress of British Geology*, 1954: 48. • DSB: 4, 549. • LKG: XIV 441. • Ward & Carozzi, *Geology Emerging*, 1984: no. 783.

1608. German transl., 1799: *Reise durch England, Schottland und die Hebriden in Rucksicht auf Wissenschaften, Kunste, Naturgeschichte und Sitten, nebst einer mineralogischen Beschreibung von Newcastle, Derbyshire, Edinburgh, Glasgow, Perth, St. Andrews, Des Herzogth. Inverary und der Finglschöhle.* Aus dem Französisch übersetzt mit Anmerkungen des J. Macdonald vermehrt von C.R.W. Wiedemann. Göttingen, Dieterich, 1799.

2 parts in one. [Part 1] 8°: xvi, 278 p. [Part 2] 8°: [2], 285p., [2] p., 7 plates.

VERY SCARCE. Translated from the French by J. Macdonald and augmented by C. Wiedemann. "His visit was made in 1784. While not romantically inclined, he was sympathetic and tried to understand the life, manners, and culture of the Scotch. But the geologist usually takes the place of the picturesque traveler" (Cox).

REFERENCES: Cox, *Guide to the Literature of Travel*, 1948-50. • LKG: XIV 442a.

1609. English transl., 1799: *Travels in England, Scotland, and the Hebrides; undertaken for the purpose of examining the state of the arts, the sciences, natural history and manners, in Great Britain ...* Translated from the French of B. Faujas Saint-Fond ... London, Printed for J. Ridgeway, 1799.

2 vols. [VOL 1] 8°: [iii]-viii, iii, 361 p. [VOL 2] 8°: viii, 352 p., 7 plates.

VERY SCARCE. First English edition, translated by ?? REFERENCES: LKG: XIV 442a. • Roller & Goodman, *Catalogue*, 1976: 1, 387.

1610. English transl., 1907: *A Journey through England and Scotland to the Hebrides in 1784, by B. Faujas de Saint-Fond; a revised edition of the English translation, edited with notes and a memoir of the author, by Sir Archibald Geikie ...* Glasgow: H. Hopkins, 1907.

2 vols. [VOL 1] 8°: xxxii, 356 p. [VOL 2] 8°: ix, 373 p., illus., 7 b&w plates printed on Japanese vellum. PAGE SIZE: 164 x 235 mm.

VERY SCARCE. This is a revised edition of the English translation, edited, with notes and a memoir of the author, by Sir Archibald Geikie.

REFERENCES: LKG: XIV 442a. • Roller & Goodman, *Catalogue*, 1976: 1, 387.

1611. — French, 1805-9.

Essai de Géologie, ou Mémoires pour servir à l'Histoire Naturelle du Globe, par B. Faujas St. Fond. Paris, Levrault, Schoell et Compagnie, 1805-9.

2 vols. bound in three. [VOL 1: 1805] 8°: [4], 493, [1] p. [VOL 2, pt. 1: 1809] 8°: [4], [1]-400, [2] p. [VOL 2, pt. 2: 1809] [4], [401]-731, [3] p., 30 engraved plates (some folding; 5 printed in color).

VERY SCARCE. This is the first appearance of Faujas' last work, which contains a summation of his life-time study and research of paleontology, geology, mineralogy and vulcanology. Volume one is devoted almost exclusively to fossils and Faujas gives a summary of the known species of fossil fishes and the localities in which they occurred. The first part of volume two is concerned with minerals and it is beautifully illustrated with five engraved and colored plates of minerals. The second portion is devoted to Faujas' final thoughts on the nature and origin of volcanoes.

Contents: 1. Animal and vegetable fossils. 2, pt. 1. Minerals. 2, pt. 2, Volcanoes.

REFERENCES: DSB: 4, 548-9. • *Freilich Sale Catalog*: no. 183. • LKG: XIII 235 & XVII 62. • Monglond, *La France Révolutionnaire*, 1930: 6, 475. • Roller & Goodman, *Catalogue*, 1976: 1, 387. • Zittel, *History of Geology*, 1901: pp. 126 & 132-3.

1612. — French, 1781-2.

Histoire | Naturelle | De La Province | De Dauphiné | Quatre Volume in-octavo, avec des Gravures, | & une Carte Géographique & Minéralogique | de cette Province. | Par M. Faujas De Saint-Fonds. | [double rule] | Tome Premier. | [double rule] | [ornament] | Imprimé & se vend, | A Grenoble, chez la Veuve Giroud, Imprimeur-Libraire | du Parlement, à la Salle du Palais. | Et se vend à Paris, | chez Nyon, Libraire, rue du Jardine. | Et au Bureau du Journal de Physique, chez J. Cochet, | Rue & Hôtel Serpenire. | [double rule] | M. DCC. LXXXI.

4 vols. [VOL 1: 1781] 8°: lxviii, [1], 464 p. [VOL 2] 8°: [VOL 3] 8°: [VOL 4] 8°: PAGE SIZE: 130 x 195 mm.

VERY SCARCE. Includes a geography and mineralogy of the province. **Research this title some more.**

REFERENCES: BL: [956.g.8.]. • CBN. • LKG: XIV 361. • NUC: [no copy listed].

1613. — French, 1809.

Système minéralogique des volcans, ou, Nouvelle classifications de leurs produits par M. Faujas Saint-Fond. Paris, Imprimerie de Levrault, 1809.

266 p., [8] leaves of plates : ill. "Cet ouvrage in a été tiré qu'au nombre stricte de soixante exemplaires. Il est extrait du IIe. volume des Essais de géologie" -P. [3]. VERY SCARCE.

1614. — French, 1798/9.

Hmo Saint-Pierre de Maestricht. Paris, Chez H.J. Jensen, An 7^{eme} de la République Française, [1798 or 99].

2°: 263 p., one engraved map, 54 plates (partly folding).

RARE. An esteemed classic account of the classic locality of the Upper Senonian near Maastricht. The plates show fine depictions of mostly vertebrata and invertebrata fossils. There is also information about the fossil mollusks of the Netherlands.

REFERENCES: BMC: 2, 557. • LKG: XIV 705. • Ward & Carozzi, *Geology Emerging*, 1984: no. 784.

1615. — Dutch, 1802 [Dutch transl.].

Natuurlyke Histoire van den St. Pietersberg bij Maastricht door B. Faujas St. Fond, uit hot Fransch door J.D. Pasteur. AmsterdamJohannes Allart, 1802.

8°: viii, [4], 340 p., folding plan, folding map, 52 plates (50 folding).

SCARCE. Translation of ??????. It is illustrated with the same excellent plates almost all depicting vertebrata and invertebrate fossils as the original Paris, 1799 edition.

REFERENCES: LKG: XIV 706a.

1616. — French, 1776.

Mémoire sur des bois de cerfs fossiles, trouvés en creusant un puits dans les environs de Montelimar en Dauphiné. Grenoble, 1776.

8°?: 24 p., illustrations. VERY SCARCE.

REFERENCES: LKG: XVII 90.

1617. — French, 18—.

Memoire sur les bois de cerf fossilies trouves dans un puis a 14 pieds 2 pouces de profondeur. Grenoble et Paris, 1779.

8°: VERY SCARCE.

REFERENCES: LKG: XVII 91a.

1618. — German, 1791.

Briefe des Abbé de Mortesagne über die erloschenen Vulkane von Vivarais und Velay. Aus dem Franzosisich von S.S. Witte. Hamburg, 1791.

8°:

VERY SCARCE. Not in NUC. First German edition, translated by S.S. Witte from *Histoire naturelle de la France meridionale* (1780).

REFERENCES: LKG: XIV 372.

FAUST, Iren.

Mineralogia. Francofurti, 1706.

See: *Theophilus, (Pseudo.) Jakob Hertel.*

FAVANNE DE MONTCERVELLE, M. *French naturalist & artist?*

REFERENCES: ABF: I 391, 112. • WBI.

1619. — French, 1784 [Sale catalog].

Catalogue Systématique et Raisonné, ou Description du Magnifique Cabinet appartenant ci-devant à M. le C. de * * *. Ouvrage intéressant pour les Naturalistes et pout les amateurs de l'Histoire Naturelle, à cause de sa Nomenclature et de la Nouvelle Méthode de Conchyliologie, de Polyptologie, de Zoophytologie, d'Ichtyologie, etc. à laquelle on

FELDMANN

a ajouté la Synonymie Spécifique du Système de Linné ... le tout enrichi de figures en tailles douces, dont la plupart des objets n'ont pas encore été gravés. Par M. de * * * ... Paris, de l'Imprimerie de Quillau, 1784.

8°: [2], [v]-xii, 558, [2] p., frontispiece, 9 plates (signed J. Jaminet de après Guil. de Favanne). The "Errata" of 2 pages follows page 558. In some copies, the 9 plates are hand colored.

RARE. Favanne compiled this catalog of the cabinet of Comté de La Tour d'Auvergne. He purchased specimens from the Davila sale of 1767. It is formed around a general natural history theme. This catalog is composed of 2,235 numbered lots, rich in stuffed animals, perserved fish, coral, shells and minerals, all arranged according to the system of LINNEAUS. The sale occurred on the 19th April 1784 in Paris.

Comté de La Tour d'Auvergne. (BORN: ; DIED:)
French aristocrat.

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REFERENCES: CBN: 50, col. 87 [colored plates]. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: 678 [quotes from advertisement]. • NUC: 317, 635 [NL 0122138]. (La Tour d'Auvergne)

FEDOROV, Evgraf Stepanovich.

See: Fyodorov, Evgraf Stepanovich.

FELDMANN, Bernhard. (BORN: 1704; DIED: Neu Ruppin, Germany, 1777) *German physician & naturalist*.

Feldmann had a successful medical practice in Neu-Ruppin.

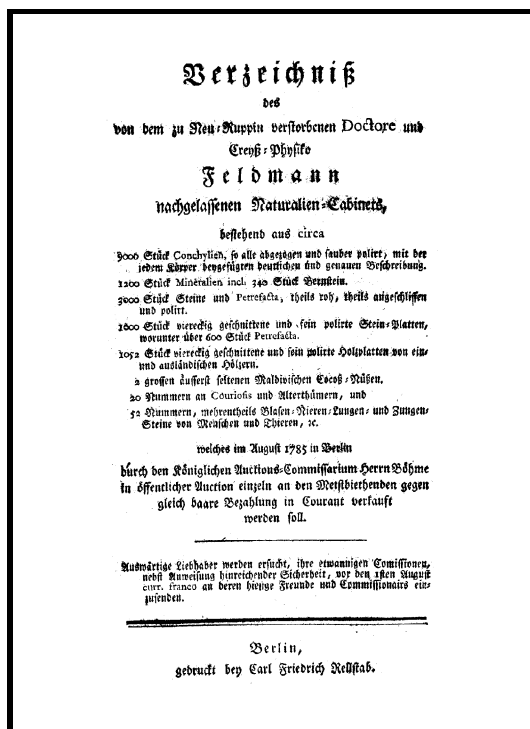
REFERENCES: *Nouvelle Biographie Générale* (Hoefer). • Wilson, *History of Mineral Collecting*, 1994: 169.

1620. — German, 1785 [Sale catalog].

[French title page:] Catalogue | du | Cabinet de Curiosités naturelles du defunt | Docteur en Medecine & Physicien | Feldmann | qui est composé de | [...14 lines of text...] | Le quel Cabinet se vendra & distraira publiquement | aux plus offrans & derniers en chersseurs a Berlin | le 1mier Aout 1785 & jours suivants par le | Commissaire des Auctions Sieur | Böhme. | [rule] | Les Amateurs etrangers font priées, de donné leurs Commissions | avant le 1mier Aout 1785 mais aussi les Assurences, le tout franc | de port. | [double rule] | Berlin, | imprimé chez Carl Friedrich Rellstab.

[GERMAN TITLE PAGE:]

Verzeichniß | des | von dem zu Neu=Ruppin verstorbenen Doctore und | Creyß=Physiko | Feldmann | nachgelassenen Naturalien=Cabinets, | [...14 lines of text...] | welches im August 1785 in Berlin | durch den Könighchen Auctions=Commissarium Herrn Böhme | in öffentlicher Auction einzeln an den Meistbiethenden gegen | gleich baare Bezahlung in Courant verkauft | werden



FELDMANN'S NATURALIEN-CABINETS, 1785

soll. | [rule] | Auswärtige Liebhaber werden ersucht, ihre etwannigen Comissionen, | nebst Anweisung hinreichender Sicherheit, vor den 1sten August | curr. franco an deren hiesige Freunde und Commissionairs ein= | zusenden. | [double rule] | Berlin, | gedruckt bey Carl Friedrich Rellstab.

8°: π^2 A-K⁸ L⁵; 87 ℓ .; [4], [1]-170 p. PAGE SIZE: 184 x 100 mm.

CONTENTS: [1 pg], Half title page, "Catalogus | des | Feldmannschen Naturalien=Cabinets. | [rule] | Die Auction geschiehet zu Berlin im Monath | August 1785."; [1 pg], Title page in French.; [1 pg], Title page in German.; [1 pg], "Vorbericht."—signed Feldmann, 1 May 1785.; [1]-169, Text.; 170, "Anhang."

VERY RARE. Auction sale catalog of Feldmann's cabinet of natural history objects, which occurred several years after his death. The cabinet contained 9000 shells, 1200 mineral specimens including 340 pieces of amber, 3000 stones and petrifications, 1000 polished or ornamental stones which included 600 fossils, 1052 samples of wood, and a smaller selection of instruments, stuffed animals, and other curiosities. The title indicates that if a buyer could not be found for the entire cabinet before 1 August 1785, the collection would be sold piecemeal later that month. According to a manuscript notation in the copy examined, the sale actually began on 15 September 1785 and continued on the following days. This delay suggests that there may have been an effort to secure the entire assembly but because the auction happened that the last minute

attempt failed.

REFERENCES: BL: [957.b.34.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 267. • Murray, *Museums*, 1904: 3, 50. • Schröter's *Journal für die Liebhaber*: 5, 492 & 558. • Wilson, *History of Mineral Collecting*, 1994: 211.

FELLER, de François-Xavier. (BORN: 1735; DIED: 1802) *French naturalist.*

1621. — French, 1780.

Examen impartial des Epoques de la nature de Mr. le comte de Buffon par l'Abbé F.X. d.F. Luxembourg, les Héritiers d'André Chevalier, 1780.

8°: 263, [5] p. Bibliography. Includes bibliographical references and index.

VERY SCARCE. Subject Buffon, Georges Louis Leclerc, comte de, 1707-1788. *Époques de la nature.*

Mineralogy – Early works to 1800.

FELLÖCKER, P. Sigmund.

1622. — German, 1855 [First edition].

Lehrbuch der Mineralogie und Geognosie. Für Obergymnasien und Oberrealschulen. Wien, Gerold, 1855.

8°: [4], 337 p., illus. VERY SCARCE.

1623. 3rd edition, 1864: Lehrbuch | der | Mineralogie und Geognosie. | [ornate rule] | Für | Obergymnasien und Oberrealschulen | bearbeitet von | P. Sigmund Fellöcker, | [...one line of titles and memberships...] | Dritte Auflage. | Mit vielen in den Text eingedruckten Holzschnitten. | [ornate rule] | Wien. | Druck und Verlag von Carl Gerold's Sohn. | 1864.

8°: *2 1-19⁸ 20² 21¹; 157ℓ.; [i]-iv, [1]-309, [1] p., one plate (showing a geological cross-section). PAGE SIZE: 216 x 138 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Vorwort."—signed Sigmund Fellöcker, 27 August 1863.; [1]-2, "Einleitung."; [3]-306, Text.; [307]-309, "Register."; [1 pg], Publisher's list.; [At end], One plate.

VERY SCARCE. An apparently once popular textbook of mineralogy used in centers of higher education within the Austrian-Hungarian empire. The first portion (pp. 3-133) provides a general introduction to mineralogical science, while the second part (pp. 134-306) give a descriptive mineralogy.

REFERENCES: NUC.

FENOTUS, Joannes Antonius.

1624. — Latin, 1575.

Alexipharmacum, sive antidotus apologetica, ad virulentias Josephi cujusdam Quercetani Armeniaci [i.e., J. Du Chesne] evomitas in libellum J. Auberti, de ortu et causis metallorum contra chymistas ... Addita est in fine epistola M. Antiti de Cressonieres, ad eundem Quercetanum. Basileae, [1575].

8°: [10], 101 p., illus. VERY SCARCE.

REFERENCES: BL: [1033.e.3.(1.)]. • LKG: III 27b.



FERBER

FERBER, Johann Jakob. (BORN: Carlsrona, Sweden, 9 September 1743; DIED: Bern, Switzerland, 12 April 1790) *Swedish mineralogist.*

Ferber studied under A.F. CRONSTEDT, J.G. WALLERUS and C. LINNÆUS at the University of Uppsala. He then traveled extensively exploring the mines of Germany, France, and Italy. In 1774, he was appointed professor of natural history and philosophy at the University in Mittau. In 1783, he relocated to St. Petersburg, and then in 1786 he entered the service of the King of Prussia.

REFERENCES: ADB: 6, 629-32. • *Catalogue of Portraits of Naturalists*: 424 [1 portrait listed]. • DBA: I 314, 62-80; 314, 82-88. • Lambrecht & Quenstedt, *Catalogus*, 1938: 137. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 733. • Sarjeant, *Geologists*, 1980: 2, 991-2. • *Svenskt Biografiskt Handlexikon*: 1, 331-2, profile. • *Svenskt Biografiskt Lexikon*: 15, 589-92. • Thomas, *Dictionary of Biography*, 1884: 905. • WBI.

1625. — German, 1773.

Herrn Johann Jakob Ferbers | Briefe aus Wälschland | über | natürliche Merkwürdigkeiten | dieses Landes | an den Herausgeber derselben | Ignatz Edlen von Born, | [...3 lines of titles and memberships...] | [vignette] | [double rule] | Prag 1773. | bey Wolfgang Gerle.

8°: π⁴ A-Bb⁸ Cc⁴; 208ℓ.; [8], [1]-407, [1] p., engraved title vignette. PAGE SIZE: 218 x 136 mm.

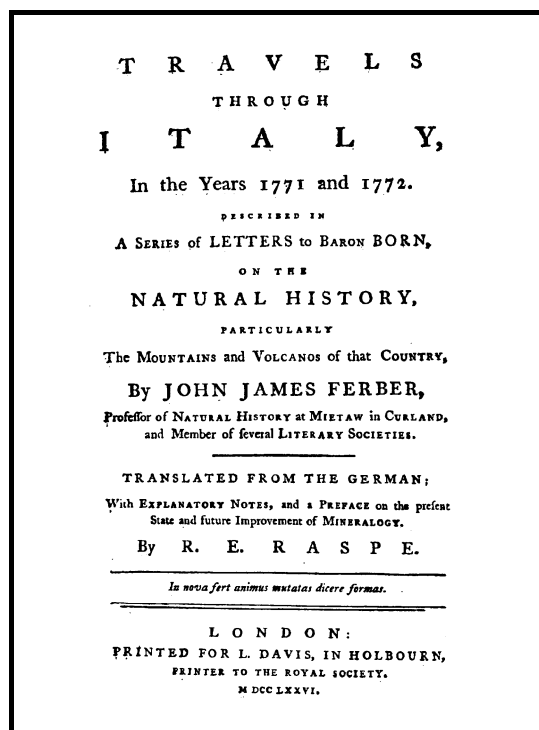
CONTENTS: [2 pgs], Title page, verso "Magni Omnino res est rerum ..."; [4 pgs], "Vorbericht des Herausgebers."—signed Ignatz edler von Born, 4 June 1773.; [2 pgs], "Inhalt."; [1]-407, Text.; [1 pg], "Druckfehler."

SCARCE. Ferber's first book is the account of his geological travels through Italy. Like many of his later works, the format of the text is as a series of 26 letters addressed to another mineralogist, Ignatz Elder von Born, who also wrote the forward. The letters describe diverse natural phenomena encountered in Ferber's travels throughout the region of southern Austria and northern Italy, but especially observations on mining, geology and mineralogy. Included are descriptions on the occurrences of specific species including marble, gypsum, jasper, as well as remarks on the ancient ruins

FERBER

of the area and observations on the mountains, volcanoes and fossils.

REFERENCES: Dana's 7th (Bibliography): 67. • DSB. • Ferchl: 152. • *Freilich Sale Catalog*: no. 184. • Hoover Collection: no. 296. • LKG: XIV 513. • Ward & Carozzi, *Geology Emerging*, 1984: no. 793. • Zittel, *History of Geology*, 1901: p. 41.



TRAVELS THROUGH ITALY, 1776

1626. English transl., 1776: Travels | Through | Italy, | In the Years 1771 and 1772. | Described In | A Series of Letters to Baron Born, | On The | Natural History, | Particularly | The Mountains and Volcanos of that Country, | By John James Ferber, | [...2 lines of titles and memberships...] | [rule] | Translated From The German; | With Explanatory Notes, and a Preface on the present | State and future Improvement of Mineralogy. | By R.E. Raspe. | [rule] | In nova fert animus mutatas dicere formas. | [double rule] | London: | Printed For L. Davis, In Holbourn, | Printer To The Royal Society. | M DCC LXXVI.

8°: π¹ a-b⁸ B-Aa⁸ Bb⁶; 208ℓ.; [2], [i]-xxxiii, [1], [1]-377, [3] p. PAGE SIZE: 212 x 128 mm.

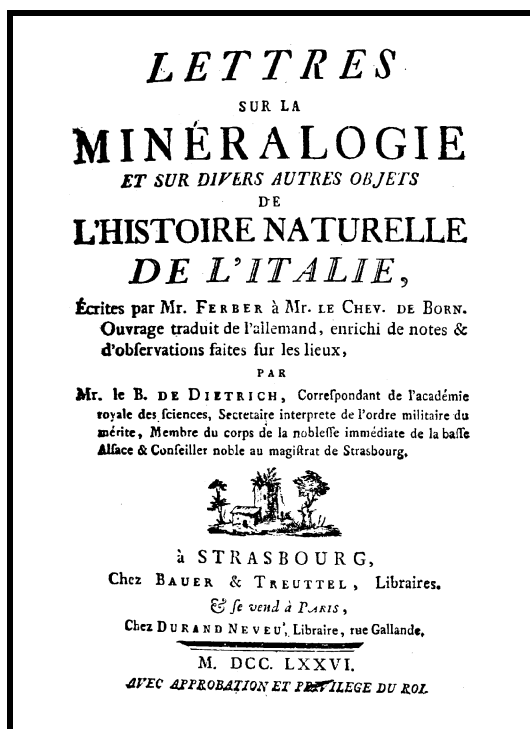
CONTENTS: [2 pgs], Half title page, "[ornate rule] | Mr. Ferber's | Travels | Through | Italy. | [ornate rule]," verso blank.; [i-ii], Title page, verso blank.; iii-xxxiii, "Preface"—dated March 1776.; [1 pg], Blank.; 1-331, Text.; [332], Blank.; 333-377, "Index."; [1 pg], Blank.; [2 pgs], "Books | Printed For | Lockyer Davis."

SCARCE. Translation by Rudolph Ernst Raspe from *Briefe aus Wälschland* (Pragae, 1773).

Rudolph Erich Raspe. (BORN: Hannover, Germany, 1737; DIED: Muckross, County Kerry, Ireland, 1794) *German geologist*. Raspe studied science and philology and worked as a librarian for several universities before fleeing to England in 1775 after pilfering some gems that were supposedly in his care. He worked at the Dolcoath Mine, Camborne, where he wrote his famous tale *The Surprising*

Adventures Of Baron Munchhausen as well as discovering in St. Agnes a new tin-bearing sulphide, stannite. In 1791 he had to move again (to Ireland) after his involvement in a mining swindle in Scotland.

REFERENCES: LKG: XIV 515b. • Roller & Goodman, *Catalogue*, 1976: 1, 391. • Ward & Carozzi, *Geology Emerging*, 1984: no. 796. (Raspe) Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 915, 143-152. • DBA: I 1000, 77-125; II 1043, 334-354. • DNB. • DSB: 11, 302-5. • *Encyclopaedia Britannica*, 11th edition. • *ISIS*, 1913-65: 2, 384. • Lambrecht & Quenstedt, *Catalogus*, 1938: 352. • Poggendorff: 2, col. 572. • Sarjeant, *Geologists*, Suppl. 1, 1986: 2, 718, Suppl. 2 (1986), 2, 1010-1 & Suppl. 1 (1995), 3, 1948-9. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: 1396.



LETTRES SUR LA MINÉRALOGIE, 1776

1627. French transl., 1776: Lettres | Sur La | Minéralogie | Et Sur Divers Autres Objects | De | L'Histoire Naturelle | De L'Italie | Écrites par Mr. Ferber à Mr. le Chev. de Born. Ouvrage traduit de l'allemand, enrichi de notes & d'observations faites sur les lieux, | par | Mr. le B. de Dietrich, Correspondant de l'académie | [...3 lines of titles and memberships...] | [ornament] | à Strasbourg, | Chez Bauer & Treuttel, Libraires. | & se vend à Paris, | Chez Durand Neveu', Libraire, rue Gallande. | [double rule] | M. DCC. LXXVI. | Avec Approbation Et Privilege Du Roi.

8°:)(8 A-Hh⁸ Ii⁶; 262ℓ.; [16], [1]-507, [1] p. PAGE SIZE: 194 x 120 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "Préface | De | M. Le Chev. De Born, | Éditeur Allemand."; [3 pgs], "Préface | Du | Traducteur."; [5 pgs], "Sommaire | du Contenu de cet ouvrage."; [1]-507, Text.; [1 pg], "Errata."

SCARCE. Translated by Baron de Philippe Frédéric Dietrich from from *Briefe aus Wälschland* (1773). Contains 26 letters on the mineralogy of Italy, including Venice,

Florence, Naples, Sicily, Mt. Etna, Island of Elba, and Corsica.

REFERENCES: Hoover Collection: no. 296. • LKG: XIV 514a. • Roller & Goodman, *Catalogue*, 1976: 1, 391. • Ward & Carozzi, *Geology Emerging*, 1984: no. 795.

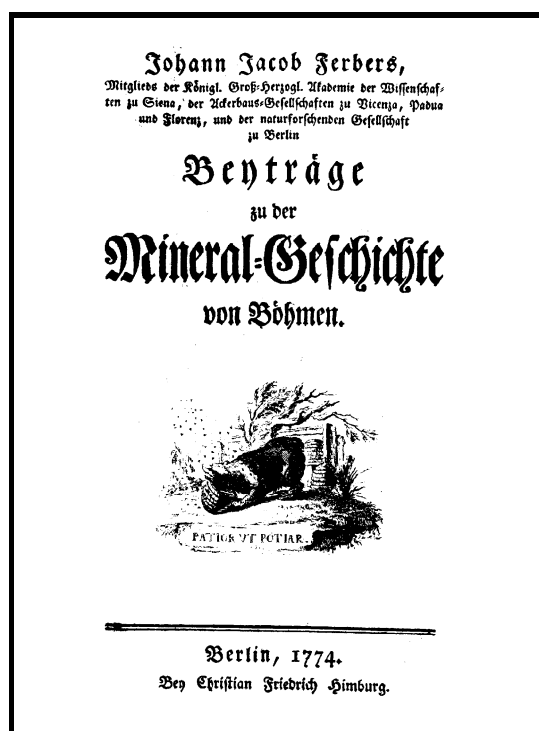
1628. — German, 1774.

Bechreibung des Quecksilber – Bergwercks zu Idria in Mittel-Cräyn. Berlin, Bey C.F. Himburg, 1774.

8°: [8], 76 p., 3 folding plates (including one colored plan).

VERY SCARCE. Description of the mercury mines at Idria, Italy.

REFERENCES: LKG: XIV 255. • Roller & Goodman, *Catalogue*, 1976: 1, 391.



Beyträge, 1774

1629. — German, 1774.

Johann Jacob Ferbers, | [...4 lines of titles and memberships...] | Beyträge | zu der | Mineral-Geschichte | von Böhmen. | [ornament] | [double rule] | Berlin, 1774. | Bey Christian Friedrich Himburg.

8°: *3 A-R⁸ S¹; 82l.; [22], [1]-162 p., one folding plate, one folding map (hand colored; "Reiches Gebürg"). PAGE SIZE: 202 x 110 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], Dedication to Albrecht von Haller, dated 23 October 1773.; [14 pgs], "Vorrede."; [2 pgs], "Inhalt."; [Folding hand colored map; "Reiches Gebürg."]; [1], Sectional title page, "Erster Abschnitt. | Von | der Lage und Eintheilung | der | Böhmischen Bergwerke, | nach den Gebirgen | und in den verschiedenen Kreisen | dieses Königreichs."; [2],

Blank.; [3]-20, Text.; [21], Sectional title page, "Zweyter Abschnitt. | Naturgeschichte und Nachrichten | von dem Betriebe | der vornehmsten | Böhmischen Bergwerke."; [22], Blank.; [23]-162, Text.; [At end], One folding plate.

SCARCE. This work, one in an important series by Ferber, went a long way in constructing the foundation for future geological studies of the Austro-Hungary empire. Divided into three parts the author first lists each mining operation in Bohemia. The second describes in detail nineteen operating mines in the area, giving details of their operation and production. The final section discusses the legal rights of the nobility versus the landowners regarding the mineral wealth of the area.

REFERENCES: LKG: XIV 72. • Roller & Goodman, *Catalogue*, 1976: 1, 391.

Travels through the Bannat of Temeswar, Transylvania, and Hungary, in the Year 1770. Described in a Series of Letters to Prof. Ferber ... By Baron Inigo Born ... To which is added, John James Ferber's Mineralogical History of Bohemia ... (London, 1777).

See: Born, Iganx Edler Von.

1630. — German, 1776.

Bergmännische Nachrichten von den merkwürdigsten mineralischen Gegenden der Herzoglich-Zweibrückischen, Chur-Pfälzischen, Wild- und Rheingräflichen und Nassauischen Länder. Miatou: J.F. Hinz, 1776.

8°: 94 p., plates.

SCARCE. Concerns the mining and mineral resources of Germany.

REFERENCES: LKG: XIV 271.

1631. — German, 1776.

Versuch einer Oryktographie von Derbyshire in England ... Miatou, J.F. Hinz, 1776.

8°: [1]-104, [i]-[xxiv] p., one folding plate (showing cross sections). PAGE SIZE: 220 x 130 mm. uncut.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Prince Peter.; [iv], Blank.; [v]-[viii], "Durchlauchtigster herzog Gnädigster Fürst und Herr."; [ix]-[xvi], "Vorrede."; [xvii]-[xviii], "Inhalt."; [xix]-[xiv], "Erklärung der Kupfertafeln."; [1]-60, "I. Physikalische Erdbeschreibung des Landes."; 60-67, "II. Von der politischen Verfassung und Haushaltung bey den Derbyshirischen Bergwerken."; 67-77, "III. Von den Grubenbau in Derbyshire und den hülffsmitteln desselben an Maschinen."; 79-81, "V. von dem Bleyeschmelzen."; 82, "VI. Von dem Kupferschmelzen in Derby in Derbyshire."; 83-85, "VII. Aufbereitung des Gallmeys."; 86-87, "VIII. Bereitung der rothen Mennige."; 88-90, "IX. Von der Porcellainfabrike bey Derby."; 91-101, "X. Bereitung des englischen Steinguts."; 101-104, "XI. Sammlung einiger englischer Bergwörter."; [At end], One folding plate.

VERY SCARCE. Describes the mines, miners and mining techniques of Derbyshire, England. The plates show geological cross sections and mining equipment, and the map is of Derbyshire.

English transl., 1808: Contained in: John Pinkerton's *A general collection of the best and most interesting voyages and travels ...* London, 1808-14, volume 2, pp. 465-88.

REFERENCES: Hoover Collection: no. 300. • LKG: XIV 433. • Ward & Carozzi, *Geology Emerging*, 1984: no. 797.

1632. — German, 1778.

Neue Beyträge zur Mineralgeschichte verschiedner Länder. Erste Band, der zugleich Nachrichten von einigen chymischen Fabriken enthält. Mietau: J.F. Hins, 1778.

8°: xii, 462 p., illustrated.

SCARCE. A note in the BLC catalog suggests that this was part of a series under the general title: "Fragment einer Geschichte des Englischen Bergbaues – Mineralogische und technologische Bemerkungen, auf einer Reise durch verschiedene Provinzen in England und Schottland gesammelt von J.C. Fabricius. Mit Anmerkungen und Zusätzen von J.J. Ferber."

REFERENCES: LKG: VI 68. • Ward & Carozzi, *Geology Emerging*, 1984: no. 798.

1633. — German, 1780.

Physikalisch – Metallurgische Abhandlungen über die Gebirge und Bergwerke in Ungarn, von Johann Jakob Ferber ... Nebst einer Beschreibung des Steirischen Einschmelzens und Stahlmachens, von einem Ungenannten. Mit kupfern ... Berlin und Stettin: Bey F. Nicolai, 1780.

8°: [16], 328 p., 4 folding plates.

SCARCE. The present work, one of author's most influential, helped to lay the ground work of the geological investigation of the Austrian-Hungarian empire. Described here in full detail are the mineral resources of the countries together with information about mining procedures and the output of various mines. The plates illustrate various mining operations.

REFERENCES: LKG: XIV 852. • Roller & Goodman, *Catalogue*, 1976: 1, 391. • Ward & Carozzi, *Geology Emerging*, 1984: no. 799. • Zittel, *History of Geology*, 1901: pp. 87-8.

1634. — German, 1784.

Anmerkungen zu physischen Erdbeschreibung von Kurland. Jacob Benjamin Fischer's Zusätze zu seinem Versuch einer naturgeschichte von Lipland, nebst Einigen anmerkungen zu physischen erdbeschreibung von Kurland, entworfen von Johann Jakob Ferber ... Rigs, J.F. Hartknoch, 1784.

8°:

SCARCE. LKG: XIV 757a. First edition. Apparently based on J.B. Fischer's work, but listed under Ferber in NUC but not BLC.

REFERENCES: LKG: XIV 757a.

1635. — German, 1787.

Nachricht | von dem | Anquicken | der | gold- und silberhaltigen Erze, | Kupfersteine und Speisen | in | Ungarn und Böhmen | nach | eigenen Bemerkungen daselbst im Jahr 1786 | entworfen | von | Johann Jacob Ferber, | [...12 lines of titles and memberships...] | [rule] | Berlin, | bey August Mylius, 1787.

8°: xxxii, 200 p., 2 plates, table.

SCARCE. In this book, Ferber delivers his observations on the processing of metallic ores containing gold, silver and copper in Hungary and Bohemia. These observations were based on his personal experiences traveling throughout the region in 1786.

REFERENCES: Hoover Collection: no. 298. • Roller & Goodman, *Catalogue*, 1976: 1, 391.

1636. — German, 1788.

Untersuchung der Hypothese von der verwandlung der mineralischen Körper in einander. Aus den Akten der Kaiserl. Akademie der Wissenschaften zu St. Petersburg übersetzt mit einigen anmerkungen vermehrte und herausgegeben von der Gesellschaft naturforschender Freunde zu Berlin. Berlin, F. Maurer, 1788.

8°: viii, 72 p.

SCARCE. Presumably concerns the origin of ore deposits.

REFERENCES: LKG: XIII 178 & 179. • Ward & Carozzi, *Geology Emerging*, 1984: no. 800.

1637. — German, 1789.

Drey Briefe mineralogischen Inhalts, an Freyherrn von Racknitz ... geschrieben von Johann Jakob Ferber ... Berlin, A. Mylius, 1789.

8°: 70 p.

SCARCE. LKG: VI 69a. First edition.

REFERENCES: LKG: VI 69a.

1638. — German, 1789.

Mineralogische und metallurgische Bemerkungen in Neuchatel, Franche Comté und Bourgogne im Jahre 1788, angestellt von J.J. Ferber. Berlin: August Mylius, 1789.

8°: 77 p., 5 folding plates.

SCARCE. The plates show mostly mining machinery and the text references the glass works at Mont Cenis.

REFERENCES: Hoover Collection: no. 297. • LKG: XIV 351. • Ward & Carozzi, *Geology Emerging*, 1984: no. 801.

1639. — German, 1804.

Relation von der item aufgetragenen mineralogischen, berg-, und huttenmannischen Reise durch einige polnische Provinzen ... herausgegeben von J.C.W. Voigt. Arnstadt und Rudolstadt, 1804.

8°.

SCARCE. LKG: XIV 726. First edition, edited by Johann Carl Wilhelm Voigt. Not under Ferber in NUC, perhaps under VOIGT though.

REFERENCES: LKG: XIV 726.

1640. — German, 1787.

Ist es vortheilhafter, die silberhältigen Erze und Schmelzhüttenprodukte anzuquicken, als sie zu schmelzen? Beantwortet von einigen zu Glashütte bey Schemnitz in Niederhungarn im Sommer und Herbst 1786 versammelten Berg- und

Schmelzwesensverständige Leipzig und Wien, Bey Rudolph Grässer und Compagnie, 1787.

8°: 144 p.

RARE. The text in German and French is a description of the silver containing ores and the methods by which they are processed, with an introduction signed J.J. Ferber.

REFERENCES: Hoover Collection: no. 295.

FERRARA, Francesco.

Intended for a career with the church, Ferrara became interested in science after witnessing an eruption of Etna. Afterwards he focused his attention natural history, graduating from the University of Catania in 1786 with degrees in medicine and philosophy. He corresponded with DOLOMIEU and SPALLANZANI. After graduation Ferrara continued his theological studies and was ordained a priest in 1792. In 1802 he was appointed professor of physics at the University of Catania.

REFERENCES: Poggendorff: 1, cols. 736 & 1564.

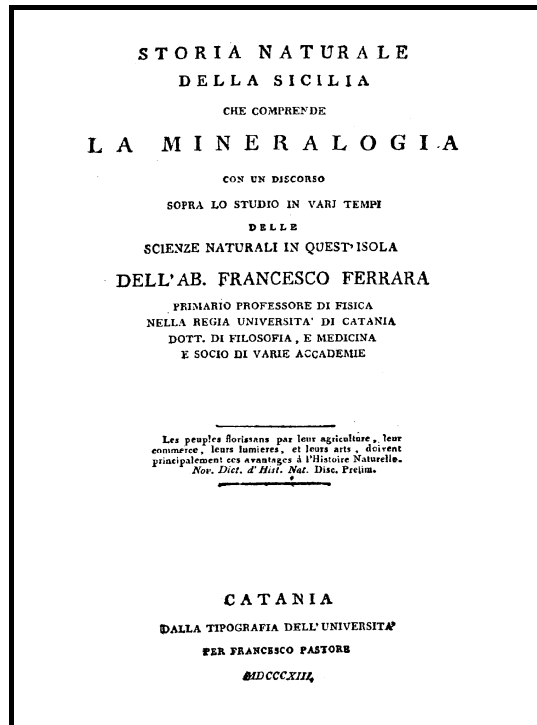
1641. — Italian, 1810.

I Campi Fiegredi della Sicilia e delle isole che le sono intorno o descrizione fisica e mineralogica di queste isole. Dell' Abate Francesco Ferra ... Messina, Della stamperia dell' Armata britannica, 1810.

2°: [6], xix, 424 p., one folding plate, folding maps.

RARE. The text provides a general description of the Island of Sicily, particularly the minerals and volcanoes of the region.

REFERENCES: BL: [444.e.12.].



STORIA NATURALE DELLA SICILIA, 1813

1642. — Italian, 1813.

Storia Naturale | Della Sicilia | Che Comprende | La Mineralogia | Con Un Discorso | Sopra Lo Studio In Varj Tempi | Delle | Scienze Naturali In Quest' Isola | Dell' Ab. Francesco Ferrara | [...4 lines of titles and memberships...] | [rule] | [...4 lines of quotation...] | [rule] | Catania | Dalla Tipografia Dell' Universita' | Per Francesco Pastore | MDCCCXIII.

4°: π^4 1-74 84 a-u4; 117 ℓ .; [8], [I]-LXIV, [2], 1-160 p. PAGE SIZE: 225 x 172 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], Dedication to Vincenzo Paterno' Castello, signed Francesco Ferrara, 13 October 1813.; [1 pg], "Tavola" [=contents].; [1 pg], Blank.; [I]-LXIV, "Discorso | Sopra Lo Studio In Varj Tempi Delle | Scienze Naturali In Sicilia."; [1 pg], Sectional title page, "Mineralogia di Sicilia."; [1 pg], Blank.; 1-160, Text.

RARE. This is one of many books dealing with the natural history of the island of Sicily. This particular title deals principally with the mineralogy of the island.

REFERENCES: BL: [1726.f.26.]. • LKG.

1643. — Italian, 1818.

Descrizione dell' Etna con la storia delle eruzioni e il catalogo dei prodotti dell' Abate Francesco Ferrara ... Palermo, Presso L. Dato, 1818.

2°: xvi, 256 p., 5 folding plates (including a map).

VERY SCARCE. Describes an eruption of Mt. Etna.

REFERENCES: BL: [1255.d.30.]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 802.

1644. — Italian, 1793.

Storia generale dell' Etna che comprende in descrizione di questa montagna: la storia delle sue eruzioni, e dei suoi fenomeni ... dall' Abate Francesco Ferrara. Catania: [F. Pastore], 1793.

8°: xlv, 359, [1] p., 4 folding plates, folding map.

VERY SCARCE. First edition. Describes an eruption of Mt. Etna.

1645. — Italian, 1823.

Memoria sopra i tremuoti della Sicilia in marzo 1823, del Signor Abate Francesco Ferrara ... Palermo: Presso L. Dato, 1823.

4°: [8], 51 p., map.

VERY SCARCE. First edition. Description of the effects of an earthquake that occurred in Sicily in March, 1823.

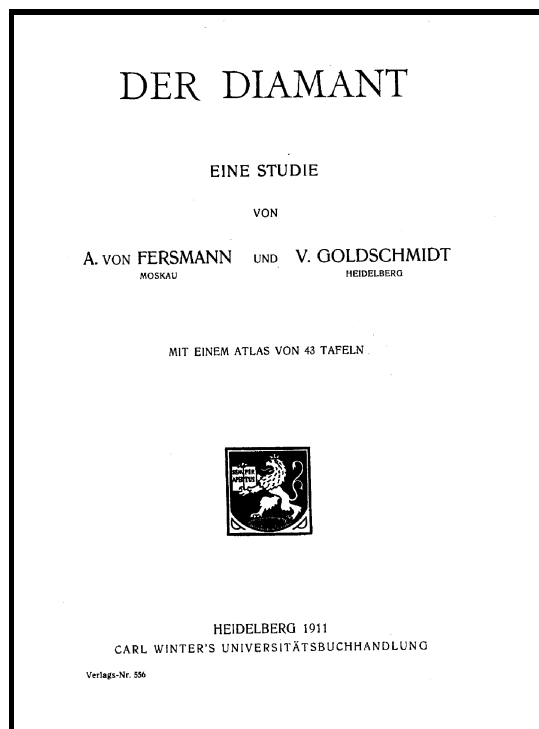
FERSMAN, Aleksandr Evgenievich. (BORN: St. Petersburg, Russia, 8 November 1883; DIED: Sochi on the Black Sea, Russia, 20 May 1945) *Russian mineralogist, crystallographer & geochemist.*

Fersman studied under V.I. VERNADSKI. In 1907, he graduated from Moscow University, and immediately continued his studies with F.A.A. LACROIX in Paris and the Norwegian geochemist Victor Moritz Goldschmidt [1888-1947] in Heidelberg. In 1909, he began teaching at Moscow University, and in 1910 he became a professor at the People's University, where in 1912 he introduced a course in geochemistry. Also in 1912, Fersman was appointed

FEUCHTWANGER

professor of mineralogy in St. Petersburg and senior curator of the Mineralogical Museum of the Academy of Sciences. Fersman was an investigator of incredible industry, and his studies include the mineral resources of the Urals, Crimea, Caucasus, Kazakhstan, Tukestan, the Altai, Transbikalia, northern Mongolia, Karelia and the Kola Peninsula. From this work several discoveries of major economic mineral deposits were made.

REFERENCES: *American Mineralogist*: **31** (1946), nos. 3-4, 173-8, portrait [by L.J. Spencer]. • DSB: **4**, 597-601 [by A. Menailov; other refs.]. • *Geologiska Föreningens i Stockholm Förhandlingar*: **67** (1945), 534-8, portrait [by H.G. Backlund]. • Gerasimovskij, V.I. and V.V. Ščerbina, "A.E. Fersmans Rolle in der Entwicklung der Wissenschaft über die nutzbaren Bodenschätze," *Geologie*, **20** (1971), 715-9. • *Great Soviet Encyclopedia*: **27**, 168-9. • *ISIS*, 1913-65: **1**, 415 [other refs.]. • *Mineralogical Magazine*: **28** (1947), no. 199, 181-92, portrait [by L.J. Spencer]. • Sarjeant, *Geologists*, 1980: **2**, 994-5, Suppl. 1 (1986), **1**, 414 & Suppl. 2 (1995), **1**, 613. • *World Who's Who in Science*: 560.



DER DIAMANT, 1911

1646. — German, 1911.

Der Diamant. | Eine Studie | Von | A. von Fersmann und V. Goldschmidt | Moskau Heidelberg | Mit Einem Atlas Von 43 Tafeln | [ornament] | Heidelberg 1911 | Carl Winter's Universitätsbuchhandlung | Verlags-Nr. 556.

2 vols. [VOL 1] 8°: xvii, 274, [2] p., 206 illus. [VOL 2] 8°: [2] p., 43 plates (some with printed overlay sheets). PAGE SIZE: 245 x 162 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "Alle Rechte, ..."; [iii]-xv, "Vorwort."; xvi-xvii, "Inhalt."; [1 pg], Blank.; [1]-40, "I. Allgemeiner Teil."; 41-70, "II.

Historischer Teil."; 71-208, "III. Spezieller Teil."; 209-216, "Atzversuche."; 217-222, "Zusammenfassung."; 223-250, "Anhang."; 251-253, "Register."; 254, "Fundorts-Verzeichnis."; 255, "Übersicht der Tafeln."; 256-274, "Erklärung der Tafeln."; [2 pgs], Advertisements to Golschmidt's other books.

[Vol 2] [2 pgs], Title page, verso blank.; 43 plates.

VERY SCARCE. Co-authored with VICTOR GOLDSCHMIDT. This is one of the best authorities on the morphology of diamond crystals as well as other features of this unique mineral species. The first part treats the general properties of diamonds including crystallography and etch figures. The second part gives an historical overview of previous investigations and includes a long bibliography. The last section describes the morphology of crystals including diamond twins. Etch figures are described including methods of developing them. The atlas is remarkable giving shaded crystal drawings and other figures rendered from actual stones. Altogether there are 292 figures of diamond crystals and associated figures.

Victor Goldschmidt. (BORN: Mainz, Germany, 10 February 1853; DIED: Salzburg, Austria, 8 May 1933) *German mineralogist & crystallographer.* Goldschmidt began as a student of metallurgy at the Industrial Academy in Berlin and the Freiberg Bergakademie, but in 1880, he graduated with a Ph.D. in mineralogy from the University of Heidelberg. In 1888, he married Leontine Porjes, who supported her husband and his students. In 1888, Goldschmidt also became a faculty member of the University of Heidelberg. There he founded the Mineralogical-Crystallographic Institute.

REFERENCES: Dana's 7th (Bibliography): **70**. • Grigorev & Shafranovskii, *Russkie Mineralogi*, 1949: pp. 196-223. • Sinkankas, *Gemology Bibliography*, 1993: no. 2077. (Goldschmidt) *American Journal of Science*: 5th Series, **26** (1934), 96. • Barr, *Index to Biographical Fragments*, 1973: 100. • Brunshwig, J., et al., *A la memoire de Victor Goldschmidt. Etudes reunies par Jacques Brunshwig, Claude Imbert et Alain Roger*. Paris, J. Vrin, 1985. 334 p. [In English and French. Bibliographies are included.]. • DBA: II 463, 276-289. • DSB: **5**, 455-6 [by G.C. Amstutz]. • NDB: **6**, 612 [by F. Herrmann]. • Poggendorff: **3**, 530, **4**, 510, **5**, 435-6 & **6**, ??? • Sarjeant, *Geologists*, 1980: **2**, 1114 & Suppl. 2 (1996), **1**, 661. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: **1**, 348-51, portrait. • Schlichtenberger, C., "Harmony and complication. The collection of Victor Goldschmidt, founder of the ethnographic museum of the J. u. E. von Portheim-Stiftung in Heidelberg," *Journal of the History of Collections*, **10** (1998), no. 2, 199-206. • WBI. • *World Who's Who in Science*: 672.

FEUCHTWANGER, Lewis. (BORN: Fürth, Bavaria, Germany, 11 January 1805; DIED: New York City, New York, U.S.A., 25 June 1876) *German/American physician, chemist & mineralogist.*

In 1827, Feuchtwanger received his M.D. from the University of Jena, and he emigrated to the United States in 1829. He eventually ended up in New York City where he opened a pharmacy. However, he turned his attention to chemistry, and developed an alloy of nickel, copper and zinc known as "German Silver." He convinced the government to mint some one-cent and three-cent specimens using his alloy, and today these are highly sought after by numismatists. Lewis' father was a mineralogist, and the son retained his interest, building a large collection and becoming a dealer in minerals and gems. He exhibited his collection at the Great Exhibition, London, 1851 and the Industrial Exhibition, London, 1862, where a portion was sold. From the 1850s to the 1870s, Feuchtwanger

obtained and sold commercial quantities of minerals and ores, opening a plant in New York to prepare chemical preparations from the raw material.

In 1832, Feuchtwanger offered his cabinet of minerals and other objects of natural history for sale, either in its entirety or piecemeal. Included were a large wax yellow Baltic amber weighing almost 2lbs., an American beryl weighing 70lbs., three collections of precious stones, and three collections of minerals containing 160, 350 and 940 specimens. Apparently, the collection was not completely dispersed as Canfield (1923) records that his daughters presented his collection to the Society of Ethical Culture in New York City about 1900.

REFERENCES: ABA: I 535, 281-284. • Adams, *Dictionary of American Authors*, 1904. • Adams, E.H., "Dr. Lewis Feuchtwanger. A short biography," *The Numismatist*, 26 (1913), no. 6, 297-302, illus. • *American Chemists & Chemical Engineers*: 2, 94-6 [by W.D. Miles]. • *American Journal of Science*: 1st Series, 22 (1832), no. 1, 180. • *Appleton Cyclopedia of American Biography*: 2, 445-6. • Elliott, *Biographical Index*, 1990: 78. • *Herringshaw's National Library of American Biography*. • Sinkankas, *Gemology Bibliography*, 1993: 1, p. 335. • Wallace, *Dictionary of North American Authors*, 1951. • WBI.

1647. — English, 1838 [First edition, issue A].

A | Treatise On Gems. | In Reference To Their | Practical And Scientific Value; | A Useful Guide For The Jeweller, | Lapidary, Artist, Amateur, Mineralogist, And | Chemist; Accompanied By A Description Of The Most | Interesting American Gems, And Ornamental | And Architectural Materials. | [rule] | By Dr. Lewis Feuchtwanger, | [...2 lines of titles and memberships...] | [rule] | New York: | Printed by A. Hanford. | [double row of dots] | 1838.

8°: [A-B]⁴ C-X⁴ Y²; 90ℓ.; [i]-vi, [2], 9-178, [2] p., 25 woodcut illus (6 numbered). PAGE SIZE: 135 x 220 mm.

RARE. As the first treatise on gemology published in the United States, this volume is surprisingly readable and accurate in its stone descriptions. It begins with general information about the properties of minerals like form, cleavage, fracture, hardness, color, specific gravity, etc. The work continues with a discussion of the minerals that are considered gems such as diamond, sapphire, chrysoberyl, topaz, etc. The descriptions each contain information about the stones history, physical properties and known localities. An appendix contains descriptions of pearls and coral. The work ends with an index to the stones described.

REFERENCES: *Freilich Sale Catalog*: no. 187. • Sinkankas, *Gemology Bibliography*, 1993: no. 2081 [long commentary].

1648. First edition, issue B, 1838: A | Treatise On Gems, | In Reference To Their | Practical And Scientific Value; | A Useful Guide For The Jeweller, Amateur, Artist, Lapidary, | Mineralogist, And Chemist. Accompanied By A De- | scription Of The Most Interesting American | Gems, And Ornamental And Arch- | itectural Materials. | [rule] | By Dr. Lewis Feuchtwanger, | [...2 lines of titles and memberships...] | [rule] | New York: | Printed by A. Hanford. | : : : : : | 1838.

4°: [A]-T⁴ U¹; 81ℓ.; [i]-[viii], [9]-162 p. PAGE SIZE: 230 x 140 mm.

CONTENTS: [i-ii], Title page, verso "Entered according

to Act of Congress, in the year 1838..."; [iii], Testimony to the quality of the work by James Renwick, dated 26 March 1838.; [iv], Blank.; [v]-vi, "Preface."; [vii-viii], Blanks.; [9]-49, "Treatise on Gems. Part I. Introduction."; [50], Blank.; [51]-147, "... Part II. Treatment of the Individual Gems."; [148], Blank.; [149]-158, "Appendix."; [159]-162, "Contents."

RARE. The text has been entirely reset with many minor changes in the format and chapter numbering.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 2082.

1649. 2nd edition, 1859: A Popular | Treatise on Gems, | In Reference To Their | Scientific Value: | A Guide For The Teacher Of Natural Sciences, | The | Lapidary, Jeweller, And Amateur: | Together With A | Description Of The Elements Of Mineralogy, And All | Ornamental And Architectural Materials. | With Elegant Illustrations. | By | Dr.L.Feuchtwanger, | [...4 lines of titles and memberships...] | New York: | D.Appleton & Company, 346 & 348 Broadway. | 1859.

12°: [2], 464, [2] p., hand-colored frontispiece, 17 plates (10 hand-colored), 134 test illus. PAGE SIZE: 184 x 126 mm.

VERY SCARCE. An enlarged edition with more technical material and longer descriptions. Feuchtwanger has added more crystallographic content and expands the material on properties and classification. The second part gives descriptions of individual gemstones, including notes on their history, value, artificial stones, uses in lapidary, etc. The plates at the end depict rough and cut diamonds, famous diamonds, etc.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 2083.

1650. 3rd edition, 1867: A Popular | Treatise On Gems, | ... | By | Dr. L. Feuchtwanger, a | [...4 lines of titles and memberships...] | Third Edition. | New York: | Published By The Author, No.55 Cedar St. | 1867.

12°: [2], 505, [1] p., frontispiece (portrait of Feuchtwanger), 17 plates.

VERY SCARCE. Although called a "Third Edition," this appears to be a reprint with new material in the form of an important bibliography and tables bound in at the end.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 2084.

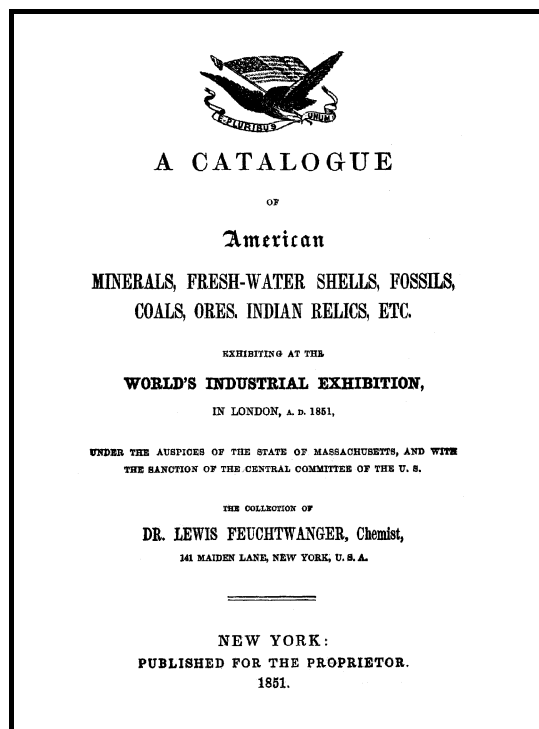
1651. 4th edition, 1872: A Popular | Treatise On Gems, | In Reference To Their | Scientific Value: | A Guide For The Teacher Of Natural Sciences | The | Lapidary, Jeweller, And Amateur: | Together With A | Description Of The Elements Of Mineralogy, And All | Ornamental And Architectural Materials. | With Elegant Illustrations. | By | Dr. L. Feuchtwanger, [...4 lines of titles and memberships...] | Fourth Edition. | New York: | Printed By The Author, No. 55 Cedar St. | 1872.

8°: [viii], 9-178, [2] p., a few woodcuts in text. PAGE SIZE: 135 x 220 mm. VERY SCARCE.

REFERENCES: NUC.

1652. — English, 1851 [Collection catalog].

[Ornament: eagle with an American flag] | A Catalogue | Of | American | Minerals, Fresh-Water Shells, Fossils, | Coals, Ores, | Indian Relics, Etc. | Exhibiting At The | World's Industrial Exhibition, | In London, A.D. 1851, | Under The Auspices Of The State Of Massachusetts, And With | The Sanction Of The Central Committee Of The U.S. | The Collection Of | Dr. Lewis Feuchtwanger, Chemist, | 141 Maiden Lane, New York, U.S.A. | [double rule] | New York: | Published For The Proprietor. | 1851.



CATALOGUE, 1851

8°: [1]-22 p. Printed wraps. Title repeated on cover. PAGE SIZE: 188 x 114 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], "General Summary."; [4], Blank.; [5]-8, "Preface."; [9]-14, "Specific Catalogue"—listing 68 lots of minerals, shells and relics.; [15], Blank.; [16], "Abbreviations."; [17]-22, "Alphabetical Index Of Specimens."

VERY RARE. Issued in conjunction with the 1851 Industrial Exhibition held in London, this is a catalog of specimens Feuchtwanger had on display in the state of Massachusetts exhibit. Several hundred specimens of American minerals, ores, shells, and relics are listed. The index at the end provides locality information and as expected shows most pieces coming from the north-eastern United States, but there are also some examples that originated from as far away as Wisconsin, Missouri and Mississippi.

REFERENCES: NUC.

1653. — English, 1862 [Sale catalog].

[Printed on the front cover, within an ornately bordered box:] Industrial Exhibition, London, 1862. | [wavy rule] | A | Large Collection | Of | American Minerals, | containing Many Hundred | Unique Specimens | Of | Gigantic Crystals And Ores. | [ornate rule] | J.W. Feuchtwanger, | Of New York, | Exhibitor And Proprietor. | [rule] | Vincent L. Dili, Stereotyper. [white space] D. Murray, Printer.

8°: [1]-17, [1] p. Pagination includes the front and back covers. Title printed on front cover.

CONTENTS: [1-2], Title page (on cover), verso blank.; [3]-5, "Catalogue | Of | Minerals."—dated January 1862. [=a descriptive text of the various mineral cabinets]; 6-17, "List of minerals contained in various collections." [=contents of 12 cabinets are described]; [1], Blank [=back cover].

VERY RARE. Exhibition and sale catalog offering a series of twelve suites of American minerals for sale by one of the earliest known specimen dealers in this country. The different collections could be purchased at a variety of prices, with most specimens originating from the eastern United States, but also some gold specimens coming from distant California.

1654. — English, 1871.

A hand-book on silex, embraced in three practical treatises: I. On soluble glass, and all its applications in the arts. II. On glass making, in all its details. III. A guide for soap making, the manufacture of all soaps and their manipulations ... By Dr. Lewis Feuchtwanger ... New-York, L. & J.W. Feuchtwanger, 1871.

8°: xii, [13]-347 p., frontispiece (portrait of Feuchtwanger), diagrams.

VERY SCARCE. LC Control Number: 08015660

1655. — English, 1874 [Collection catalog].

Catalogue of Lewis Feuchtwanger's Mineral Collection. New York, 1874.

8°: 31 p., center stapled.

EXTREMELY RARE. No copy located. This title is listed in a catalog of books for sale by the famous Foote mineral dealing firm circa 1889. This almost certainly was a sale prospectus for Feuchtwanger's mineral collection.

FIBIG, Johann. (BORN: ?; DIED: Mainz, Germany, 21 October 1792) *German lawyer, mineralogist & naturalist.*

Fibig was a lawyer, professor of natural history at the University of Mainz and an advisor to the government.

REFERENCES: DBA: I 317, 68-70. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, cols. 742-3. • WBI.

1656. — German, 1787.

Joh. Fibigs | [...5 lines of titles and memberships...] | Handbuch | der | Mineralogie. | [ornament] | [double rule] | Mainz und Frankfurt | bey Barrentrapp und Wenner. | [rule] | Gedruckt in der St. Rochus Hospitals=Buchdruckerey. | 1787.

8°: [16], 392, [2] p. A standard handbook of mineralogy. VERY RARE.

REFERENCES: BL: [972.e.20.]. • BMC: 2, 569. • *Katalog Bergakademie Freiberg*, 1879: p. 197 [VI. 265.]. • LKG: XII 117.

1657. — German, 1789-91 [Periodical].

Bibliothek der gesammten Naturgeschichte. Herausgegeben von J. Fibig und B. Nau. Frankfurt und Mainz, bei Varrentrapp und Wenner, 1789-91.

2 vols. RARE.

REFERENCES: BL: [437.b.19.]. • *Katalog Bergakademie Freiberg*, 1879: p. 197.

FICHTEL, Johann Ehrenreich von. (BORN: Pressburg, Hungary, 29 September 1732; DIED: Hermannstadt, Germany, 4 February 1795) *Hungarian mineralogist.*

Fichtel held various advisory positions in the Austrian government. He wrote extensively on geology and mineralogy of Austria and Hungary.

REFERENCES: ADB: 6, 771. • Anon., "Johann Ehrenreich von Fichtel," *Arch. Ver. siebenbürgen Landes.*, n.s., 3 (1858), 432-3. • Csiky, *Forerunners of Mining-Geology Mapping*, 1984. • DBA: I 317, 155-166; II 364, 429-431. • Ferchl: 153. • Lambrecht & Quenstedt, *Catalogus*, 1938: 137-8. • *Magyar Életrajzi Lexikon*. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • NDB: 5, 125-6 [by M. Kirchmayer]. • Poggendorff: 1, col. 743. • Sarjeant, *Geologists*, 1980: 2, 996, Suppl. 1 (1986), 1, 415 & Suppl. 2 (1995), 1, 614. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

1658. — German, 1780.

Beytrag zur Mineralgeschichte von Siebenbürgen. [Nürnberg, In Verlag der Raspischen Buchhandlung, 1780].

[ALSO UNDER THE TITLE:]

Nachricht von den Versteinerungen des Grossfürstenthums Siebenbürgen mit einem Anhang und beygefügter Tabelle über die sämmtlichen Mineralien und Fossilien dieses Landes. Von J.E. von Fichtel ... Herausgegeben von der Gesellschaft naturforschender Freunde zu Berlin. Nürnberg: Raspische Buchhandlung, 1780.

2 vols. [VOL 1] 4^o: [2], 158, [1] p., 7 folding plates; [VOL 2] 4^o: 134, [1] p., 4 hand colored folding plates.

VERY SCARCE. Contains an interesting and important account of the fossiliferous Tertiary deposits of the low parts of Siebenbürgen (Transsylvania), with a chapter at the end on the minerals and their localities in the same region. Contents of volume one: "Nachricht von den Versteinerungen des Grossfürstenthums Siebenbürgen, mit einem Anhang und beygefügter Tabelle über die sämmtlichen Mineralien und Fossilien dieses Landes." Contents of volume two: "Geschichte des Steinsalzes und der Steinsalzgruben im Grossfürstenthum Siebenbürgen."

REFERENCES: *Freilich Sale Catalog*: no. 189. • LKG: XIV 848 & 849a. • Roller & Goodman, *Catalogue*, 1976: 1, 395. • Ward & Carozzi, *Geology Emerging*, 1984: no. 806.

1659. — German, 1791-4 [First edition].

Mineralogische | Bemerkungen | von den | Karpathen. | Von | Johann Ehrenreich von Fichtel | [...4 lines of titles and memberships...] | [rule] | Erster [-Zweyter] Theil. | [vingette, hand-colored] | Wien, 1791 | bei Joseph Edlen von Kurzbeck, | k.k. Hofbuchdrucker, Groß= und Buchhändler.

2 parts. [Part 1: 1791] 8^o: π^5 A-2B⁸ 2C⁶; 211 ℓ .; [10], [1]-[412] p.; [Part 2: 1794] 8^o: 2D-2Y⁸ 2Z⁶; 158 ℓ .; [413]-730 p., one folding map. PAGE SIZE: 210 x 130 mm.



MINERALOGISCHE BEMERKUNGEN, 1791

CONTENTS: [Part 1] [2 pgs], Title page, verso blank.; [4 pgs], "Vorbericht."; [2 pgs], "Uebersicht."; [1]-411, Text.; [412], Blank.

[Part 2] [413-414], Title page, verso blank.; [415]-730, Text.

RARE. Zittel says "the present work is devoted chiefly to a careful enumeration and description of the eruptive rocks in the Carpathians. He distinguishes volcanic outbreaks, with which superficial lava flows are associated, from volcanic upheavals, in the course of which wide regions are affected, and masses of igneous material are intruded in the crust. It can easily be understood that Fichtel's work met with an incredulous reception by Werner and his adherents." Fichtel included not only basalt but all granitoid, gneissose, schistose, and doleritic series as igneous in their origin. He was able to distinguish two kinds of volcanic mountains: 1) those which consist of immense uniform masses, sometimes building up a whole mountain-chain, and 2) those in which rocks of different constitution alternate with one another in a stratified way.

REFERENCES: Dana's 7th (Bibliography): 70. • Hoover Collection: no. 311. • LKG: XIV 850b. • Roller & Goodman, *Catalogue*, 1976: 1, 395. • Zittel, *History of Geology*, 1901: pp. 88-9.

1660. 2nd edition, 1816: Mineralogische Bemerkungen von den Karpathen. Von Johann Ehrenreich von Fichtel ... Zweite unveränderte Ausgabe. Wien: In der Camesina'schen Buchhandlung, 1816.

8^o.
RARE. The present work "is devoted chiefly to a careful enumeration and description of the eruptive rocks in the Carpathians. He distinguishes volcanic outbreaks, with

FICHTEL

which superficial lava flows are associated, from volcanic upheavals, in the course of which wide regions are affected, and masses of igneous material are intruded in the crust. It can easily be understood that Fichtel's work met with an incredulous reception by Werner and his adherents." (Zittle) Fichtel included not only basalt but all granitoid, gneissose, schistose, and doleritic series as igneous in their origin. He was able to distinguish two kinds of volcanic mountains: 1) those which consist of immense uniform masses, sometimes building up a whole mountain-chain, and 2) those in which rocks of different constitution alternate with one another in a stratified way.

REFERENCES: Jonathan Hill, Bookseller: cat 11, no. 59. • LKG: XIV 850b. • Zittle, *History of Geology*, 1901: pp. 88-9.

ejecta, remarks on the criticism of his earlier book on the Carpathians.

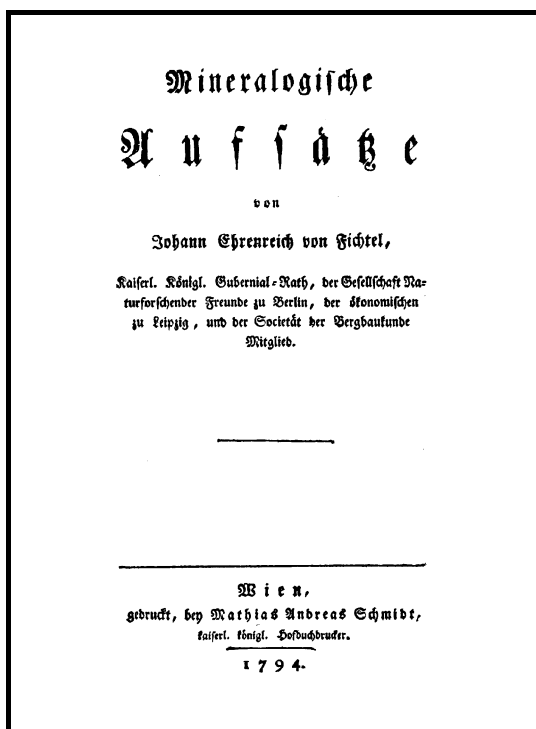
REFERENCES: Dana's 7th (Bibliography): 70. • Hoover Collection: no. 310. • LKG: VI 110. • Ward & Carozzi, *Geology Emerging*, 1984: no. 807.

1662. — German, 1792.

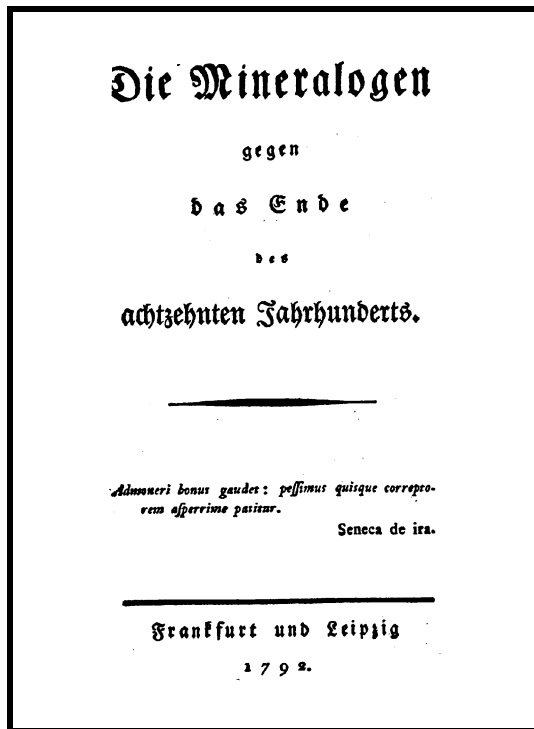
Machricht von einem in Ungarn neu entdeckten ausgebrannten Vulkane, von J.E. von Fichtel. Berlin, 1792.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 851c. • Roller & Goodman, *Catalogue*, 1976: 1, 395.



MINERALOGISCHE AUFSÄTZE, 1794



DIE MINERALOGEN, 1792

1661. — German, 1794.

Mineralogische | Aufsätze | von | Johann Ehrenreich von Fichtel, | [...4 lines of titles and memberships...] | [rule] | [rule] | Wien, | gedruckt, bey Mathias Andreas Schmidt, | kaiserl. königl. Hofbuchdrucker. | [rule] | 1794.

8°: π^3 A-Z⁸ 2a⁴; 200 ℓ .; [6], [1]-374 p. PAGE SIZE: 217 x 137 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Erinnerung."; [2 pgs], "Ordnung | der | abgehandelten Gegenstände."; [1]-374, Text.

VERY SCARCE. This work is concerned with all sorts of mineralogical and geological matters. It is divided into 25 chapters, some of which concern: iron ore deposits, manganese dioxide, Transylvanian gold deposits, the origins of ore deposits, much on volcanic

1663. — German, 1792.

Die Mineralogen | gegen | das Ende | des | achtzehnten Jahrhunderts. | [tapered rule] | [...2 lines of quotation, signed Seneca de ira...] | [rule] | Frankfurt und Leipzig | 1792.

8°: π^1 A-H⁸ I²; 66 ℓ .; [2], [1]-130 p. PAGE SIZE: 194 x 98 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-130, Text.

RARE. Although published anonymously, this remarkable work has since been attributed to Johann Ehrenreich von Fichtel. Probably frustrated by the confusion of the mineralogical science in the 1790s, the author penned this sharp satire that attempts to classify mineralogists based upon their own theories. Within the 48 groupings, Fichtel recognizes

“systematics” who classify everything even if it is not a mineral, “geometristen” who view the world through angles, “sexulaists,” “antirevoluzionisten,” “ignivomists,” “neptunists,” “neutralists,” “skepticts,” “orthodox,” etc. A very humorous and biting commentary on the mineralogical science of the time.

Reprint, 1993: *Die Mineralogen gegen das Ende des 18. Jahrhunderts*. 1. Auflage, Nachdruck des von ... 1792 in Frankfurt und Leipzig erschienenen Originals. Mit einem Nachwort von Hans Prescher und Peter Schmidt. Leipzig, Deutsche Verlag für Grundstoffindustrie, 1993. 84 p. Published as: *Freiberger Forschungshefte*, D: Historische Bergbau, no. 199.

REFERENCES: LKG: XII 194. • Roller & Goodman, *Catalogue*, 1976: 1, 395.

FIEDLER, Heinrich. (BORN: Reisse, Germany, 10 February 1833; DIED: Breslau, Germany, 22 January 1899) *German mineralogist*.

Fiedler studied natural history and mathematics at the University in Breslau graduating in 1854. In 1855 he was appointed custodian of the mineralogical collection at the University of Breslau. Eventually, Fiedler became the director of the Oberrealschule in Breslau.

REFERENCES: ADB: 48, 552-4. • DBA: I 318, 177-179. • WBI.

1664. — German, 1863.

Die | Mineralien Schlesiens | mit Berücksichtigung | der angrenzenden Länder | von | Dr. Heinrich Fiedler, | [2 lines of titles and memberships] | [ornate rule] | Breslau, | Verlag von F.E.C. Leuckart | (Constantin Sander) | 1863.

8°: I-VI, [2], [1]-100, [2] p. PAGE SIZE: 162 x 108 mm.

CONTENTS: [I-II], Title page, verso blank.; [III]-VI, “Vorwort,” signed H. Fiedler, October 1862.; [1 pg], “Uebersicht der Ordnungen.”; [1 pg], Blank.; [1]-84, Text.; [85]-88, “Sachregister.”; [89]-100, “Orts-Register.”; [1 pg], “Einige Verbesserungen.”; [1 pg], Publisher’s advertisement.

SCARCE. Standard topographical treatment listing the mineral species that occur in Silesia and adjacent regions in Germany. It is divided into 18 classes that are defined in the introduction. Typeset in a small font the text allows a great deal text to be presented in this small book.

REFERENCES: BL: [7105.a.5.(2.)]. • Fleszarowa, *Bibliografia Geologiczna Polski*, 1966: no. 822. • Sinkankas, *Gemology Bibliography*, 1993: no. 2089 [wrong year]. • Spencer, *Catalogue of Topographical Mineralogies*, 1948: [p. 308].

FIEDLER, Johann. (BORN: 1612; DIED: 1672) *German theologian*.

REFERENCES: ADB: I 318, 185. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.

1665. — Latin, 1648 [Dissertation].

Jesu feliciter concedente. De metallis. Dissertatio physica, quam consensu inclutæ Facultatés philosophicæ in illustri Lipsiensium Academia m. Johannes Fiedler Cygneus, et Henricus Friesleben, Altenburgensis Misnicus, magisteriicandidatus. Ad diem IX. Decembris, anno M.DC.XLVIII. horis, locoq conuetis publicæ disquisitioni exhibent.

[Lipsiæ:] Typis hæredum Friderici Lanckisch, [1648].

4°: [23] p. Dissertation concerning metals.

Henricus Freiesleben was respondent. VERY SCARCE.

REFERENCES: LKG: XVI 44.

FIEDLER, Karl Wilhelm. (BORN: 4 December 1758; DIED: c1831) *German apothecary*.

REFERENCES: DBA: I 318, 240-249. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: I, col. 745. • WBI.

1666. — German, 1787-90.

Allgemeines pharmazeutisches, chymisches, mineralogisches Wörterbuch; oder alphabetische Anleitung zum Gebrauche für Apotheker, Chymisten und Mineralogen ... Mannheim, C.F. Schwan und G. C. Götz, 1787-1790.

2 vols. Bd. 1 : A-D Bd. 2 : E-Li

VERY SCARCE. A dictionary of science, encompassing pharmacy, chemistry, and mineralogy. Only two volumes of the work ever appeared.

REFERENCES: LKG: VIII 9.

FIELLSTRÖM, Nathaniel.

1667. Dissertation, 1770: *Dissertatio Gradualis de Cultura Mineralium in Lapponia Reipublicae Admondum Profutura Praeside Lastbom, Johanne; Upsalae, 1770.*

8°: 20 p.

VERY SCARCE. Dissertation on the minerals and mineral industry of Lapland.

FINCH, John.

1668. — English, 1833.

Travels in the United States of American and Canada, containing some Account of their Scientific Institutions, and a Few Notices of Geology and Mineralogy of those Countries. London. 1833.

8°: xv, 331 p., plus errata slip.

VERY SCARCE. “Finch’s itinerary south of Washington, which he left in March 1824, included Mount Vernon, Fredericksburg, Charlottesville, Richmond, Williamsburg, and Norfolk...While at Charlottesville he visited both Jefferson and Madison, and at Richmond he called on John Marshall...the main concern is with account of the author’s visits to prominent people” - Clark. The author also writes of the Shenandoah, treatment of the slaves, Daniel Webster, John Quincy Adams, etc. Canada is only included at pp. 322-31.

REFERENCES: Sabin, *Dictionary*, 1868-1936: no. 24353.

FINOT, Louis. (BORN: 1864; DIED: 1935) *French oriental scholar*.

Educated in Paris, Finot came onto the staff of the Bibliothèque Nationale in 1890. He specialized in the study of Indian languages, archeology, ethnology. In 1917 he became the Director of Studies at the École Pratique des Hautes Études.

REFERENCES: ABF: II 263, 44-45. • DBF: 13, 1378. • WBI.

1669. — French, 1896.

Les | Lapidaires Indiens | Par | Louis Finot | [...2 lines of titles and memberships...] | [ornament] | Paris | Librairie Émile Bouillon, Éditeur | 67, Rue De Richelieu, Au Premier | [short rule] | 1896.

8°: [8], [I]-LII, [4], [1]-280 p. PAGE SIZE: 240 x 160 mm. uncut.

CONTENTS: [2 pgs], Half title page, verso "Chalon-Sur-Saone, Imp Française Et Orientale De L. Marceau."; [2 pgs], Title page, verso blank.; [2 pgs], Series title page, verso blank.; [1 pg], Note of award to Finot.; [1 pg], Blank.; [I]-LII, "Introduction."; [1 pg], "Abbreviations."; [1 pg], Blank.; [1 pg], "Bibliographie."; [1 pg], Blank.; [I]-207, Text.; [208], Blank.; [209]-244, "Variantes Et Notes."; [245]-273, "Indices."; [274], Blank.; [275]-277, "Additions Et Corrections."; [278], Blank.; [289]-280, "Table Des Matières."

VERY SCARCE. This is a study of ancient Indian lapidaries reproduced in Sanskrit together with copiously annotated parallel translations in French. The lengthy introduction provides a history of lapidary tradition in ancient India and compares the various works against each other. This is followed by the reproduction and translations of the ancient texts: *Ratnaparikṣā* of Buddhabhatta, *Bṛhatsaṃhitā* of Varāhamihira, *Agastimata*, *Navaratnaparikṣā*, *Agastiyā Ratnaparikṣā*, *Ratnasamgraha*, *Laghu-Ratnaparikṣā*, and the *Maṇimāhātmya*. Many pages of textual notes and comprehensive indexes conclude the book.

Facsimile reprint, 1986: Paris, Adidom, 1986.

REFERENCES: Biswas, *Gems and Minerals in Ancient India*, 1997: ????. • Sinkankas, *Gemology Bibliography*, 1993: no. 2107.

FISCHER, Carl Walther. (BORN: 1897; DIED: 1979) *German geologist, mineralogist & historian of science.*

Fischer was director of the Staatliches Museum für Mineralogie und Geologie, 1945-8, thereafter a school teacher.

REFERENCES: *Jahreshefte Gesellschaft für Naturkunde in Württemberg*: Jg. 134 (1979), 256-8. • Metz, R., "Walther Fischer zum 75. Geburtstag," *Aufschluss*, Jg. 23 (Juni, 1972), 209-22, portrait. • Prescher, H., "Carl Walther Fischer (1897-1979). Mineraloge, Museumsmann, Schuldirektor, Wissenschaftshistoriker," *Beitr. Biogr. säch. Geowiss.*, 39 (1993), 21-54. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 615-6.

1670. — German, 1939.

Mineralogie in Sachsen | von Agricola bis Werner | Die ältere Geschichte | des Staatlichen Museums für Mineralogie und Geologie | zu Dresden (1560-1820) | * | Mit 24 Tafeln | und 18 Abbildungen im Text | Von | Dr. -Ing. Walther Fischer | Kustos am Staatlichen Museum für Mineralogie | und Geologie zu Dresden | 1939 | [rule] | Verlagsbuchhandlung C. Heinrich • Dresden N 6.

8°: π^4 1-218 226; 178 ℓ .; [i]-viii, [1]-347, [1] blank p., 18 text figures, frontispiece, 23 black and white plates. PAGE SIZE: 235 x 150 mm.

CONTENTS: [Facing p. i], Frontispiece, "Kurfürst August von Sachsen," with tissue guard.; [i-ii], Title page, verso dedication to Robert Richard Fischer.; [iii], "Inhaltsverzeichnis."; [iv], Blank.; [v]-viii, "Vorwort."; [1]-28, "I. Der Stand der mineralogischen-geologischen

Erkenntnisse um 1550. (Die Arbeiten Georg Agricola über Mineralogie und Geologie."; [29]-49, "II. Mineralogisches in der Kurfürstlichen Kunstkammer zu Dresden."; [50]-74, "III. Begründung selbständiger Mineralien- und Naturalienkabinette und deren Entwicklung unter Johann Heinrich v. Heucher bis zu dessen Tode 1746."; [75]-92, "IV. Die Inspektoren des Mineralienkabinetts bis zum Jahre 1746."; [93]-103, "V. Das Bernsteinkabinett."; [104]-138, "VI. Die Entwicklung der Sammlungen unter den Inspektoren Eilenberg und Birkhan (1746-1778)."; [139]-186, "VIII. Vom Mineralienkabinett zum wissenschaftlichen Museum. Der Anteil der Inspektoren Titius und Treutler an der Entwicklung der Mineralogie (1778-1819)."; 187-196, "Anmerkungen zu Kapitel I (Nr. 1-90)."; 196-208, "Anmerkungen zu Kapitel II (Nr. 91-160)."; 208-226, "Anmerkungen zu Kapitel III (Nr. 208-226)."; 226-234, "Anmerkungen zu Kapitel IV (Nr. 269-355)."; 234-238, "Anmerkungen zu Kapitel V (Nr. 356-396)."; 238-272, "Anmerkungen zu Kapitel VI (Nr. 397-561)."; 272-320, "Anmerkungen zu Kapitel VII (Nr. 562-983)."; 321-322, "Anhang: Regeln für Museumsbesucher (aus der 'Museographia' des Neickelius 1727, S. 454-458)."; [323]-338, "Personen- und Verfasserverzeichnis."; [339]-342, "Sachverzeichnis."; [343]-347, "Verzeichnis der Abbildungen und Tafeln (mit Erläuterungen der Tafeln)."; [1 page], Blank; [At end], 23 plates.

PLATES: All plates with the exception of the frontispiece have at their upper left hand corner, the description, "Fischer, Mineralogie," and at their upper right hand corner the "Tafel" number. All plates have descriptions underneath each illustration.

Frontispiece. Kurfürst August von Sachsen. Founder of the Dresden "Kunstkammer." Tafel 1. Georg Agricola (3 portraits) and Johannes Kentmann (2 portraits). Tafel 2. Johannes Mathesius und Giovanni Maria Nossen. Tafel 3. Wolf Caspar von Klengel und August der Starke. Tafel 4. Ehrenfried Walther von Tschirnhaus und Johann Aegidius von Alemann. Tafel 5. Johann Heinrich von Heucher. Tafel 6. Heinrich Graf von Brühl und Ernst Christoph Graf von Manteuffel. Tafel 7. Johann Paul Wurfbaun und August Quirinus Rivinus. Tafel 8. Christian Gottlieb Ludwig. Tafel 9. Carl Gottlieb Altenburger und Johann Gottlieb Michaelis.

Tafel 10. Friedrich Wilhelm Heinrich von Trebra und Friedrich August der Gerechte. Tafel 11. Friedrich Anton Freiherr von Heynitz und Joseph Friedrich Freiherr zu Rachnitz. Tafel 12. Johann Friedrich Wilhelm von Charpentier und Abraham Gottlob Werner. Tafel 13. Buildings in Dresden that have housed the Kunstkammer (3 figures). Tafel 14. Regimentshaus (about 1800) and a reproduction of a view of Museum Richterianum. Tafel 15. Zwingerhof (about 1754) and a plan of the Naturalienkabinetts in Zwinger. Tafel 16. Zwingerhof (about 1758) and a view of Schloßturn in Zwinger (early 1800's). Tafel 17. Reproduction of early plates showing various vessels and jars (2 figures). Tafel 18. Reproduction of a 1719 engraving showing a parade of miners in Dresden. Tafel 19. Emerald specimen from Columbia and a wire silver specimen from Schneeberg.

Tafel 20. Specimens of various silver containing minerals (4 figures). Tafel 21. Fossils (2 figures). Tafel 22. Fossils (3 figures). Tafel 23. Fossils (1 figure).

VERY SCARCE. Excellent, thoroughly detailed history of mineralogy from 1550 to 1817 of the very important mining district of Saxony, Germany. It is written from the viewpoint of the mineralogical collections of Dresden, and contains information not easily found in other references. The work contains sections dealing with the contributions of Agricola to mineralogy and geology (pp. 1-28); the representation of mineralogy in the royal collections of Dresden (pp. 29-49); the establishment of independent mineral

cabinets and their development under Johann Heinrich von Heucher (pp. 50–74); the inspectors of the mineral cabinet to the year 1746 (pp. 75–92); the amber cabinet (pp. 93–103); the continued development of the collections from 1746 to 1778 (pp. 104–138); the transition of the mineral cabinet to scientific institution during the period 1778 to 1819 (pp. 139–186). The remainder of the book gives 983 notes referenced in the text and indexes to the names and subjects mentioned. An extremely valuable reference work to the history of mineralogy in Germany.

REFERENCES: *American Mineralogist*: 25 (1940), 379. • Dana's 7th (Bibliography): 70. • Hoover Collection: no. 313. • *Lychnos*: 1941, 398–403 [by N. Zenzén]. • NUC.

1671. — German, 1961.

Gesteins- und Lagerstättenbildung | im Wandel der | wissenschaftlichen Anschauung | Von | Dr.-Ing. Walther Fischer, Stuttgart | vorm. Direktor des Staatl. Museums für Mineralogie und Geologie zu Dresden | Mit 12 Tafeln sowie 12 Abbildungen und 36 Tabellen im Text und auf 4 Beilagen | [ornament] | E. Schweizerbart'sche Verlagsbuchhandlung | (Nägele u. Obermiller) Stuttgart 1961.

8°: π^4 1-378; 300 ℓ .; 8°: [i]-viii, [1]-592 p., name and subject indexes, frontispiece, 11 plates, 36 tables (2 folding), 12 text illus. PAGE SIZE: 240 x 155 mm. VERY SCARCE.

CONTENTS: [Facing p. i], Frontispiece, "Das Erinnere nach Johann Joachim Becher,"; [i-ii], Title page, verso "Alle Rechte, auch das der Übersetzung, vorbehalten | ..."; [iii]-v, "Vorwort."—signed Walther Fischer, October 1960; [vi], Blank.; [vii]-viii, "Inhalt."; [1]-542, Text.; [543]-562, "Personenregister."; 563-592, "Orts- und Sachregister."

PLATES: All plates have at their lower left hand corner, the description, "Fischer, Gesteins- und Lagerstättenbildung" and at their upper right hand corner the "Tafel" number. All plates have descriptions underneath each illustration.

Frontispiece. Reproduction of Johann Joachim Becher concept of the interior of the earth published in his "Opuscula chymica rariora" in 1719. Tafel 1 (p. 16). The first illustration of a geological cross-section, Johann Gottlob Lehmann, 1756 and the earliest geological map of Thüringen from Georg Christian Füchsel, 1761. Tafel 2 (p. 56). Johann Carl Wilhelm Voigts geological profile, 1782 and Bernhard von Cotta's idealized geological profile, 1842. Tafel 3 (p. 64). J.C.W. Voigt, A.G. Werner, J.G. Lehmann and C.F. Naumann. Tafel 4 (p. 80). H.C. Sorby, H. Rosenbusch, H. Vogelsang and F. Zirkel (Medallion profile). Tafel 5 (p. 224). A. Michel-Lévy, F. Becke, J.H.L. Voigt and F. Rinne. Tafel 6 (p. 264). G.A. Daubrée, W.J. Vernadsky, A.E. Fersman and V.M. Goldschmidt. Tafel 7 (p. 312). Georg Agricola. Tafel 8 (p. 344). J.F.W.T. von Charpentier and F.A. Breithaupt. Tafel 9 (p. 360). F.C. Freiherr von Beust and S.A.W. Freiherr von Herder. Tafel 10 (p. 384). G. Bischof, B. von Cotta, A. von Groddeck and F. von Sandberger. Tafel 11 (p. 448). A.W. Stelzner and P. Niggli.

REFERENCES: *Naturwissenschaftliche Rundschau*: 14 (1961), 359 [by A.E. Hiller]. • NUC: [NF].

FISCHER, Jacob Benjamin. (BORN: Riga, Germany, 13 October 1731; DIED: Riga, Germany (?), 6 June 1793) *German apothecary*.

REFERENCES: *Deutsche Apotheker Biographie Supplement I*: 123.

1672. — German, 1778.

Versuch einer Naturgeschichte von Livland, entworfen von J.L.[!] Fischer ... Leipzig: J.G.I. Breitkopf, 1778.

8°: 16, [8], 374, [16] p., folding plate.

RARE. Concerns the natural history, including mineralogy, of Livonia.

REFERENCES: LKG: XIV 756.

1673. — German, 1791.

Versuch einer Naturgeschichte von Livland, entworfen von J.B. Fischer ... Zweite vermehrte und verbesserung Auflage mit Kupfern. Königsberg: F. Nicolovius, 1791.

8°: xxiv, 826, [44] p., 4 plates (3 folding).

RARE. Greatly enlarged edition.

REFERENCES: LKG: XIV 756.

FISCHER, Sigmund Caspar.

1674. — German, 1831 [First edition].

Handbuch | der | Mineralogie | nebst | einer kurzen Abhandlung über das Vorkommen, über die | Bildung und Benützung der Mineralien, und einer | Anleitung, dieselben zu bestimmen, | von | Sigmund Caspar Fischer, | [...5 lines of titles and memberships...] | [tapered rule] | Wien, 1831. | Verlag von J.G. Heubner.

8°: xvi, [2], 457 p., engraved frontispiece.

VERY SCARCE. A handbook of mineralogy that includes discussions of their occurrences, the teaching of science, the use of minerals, and a guide to their determination.

REFERENCES: BL: [no copy listed].

1675. 2nd edition, 1840: Handbuch der Mineralogie nebst einer kurzen Abhandlung über das Vorkommen, über die Bildung und Benützung der Mineralien, und einer Anleitung, dieselben zu bestimmen. Zweite Auflage. Wein, 1840.

8°: xii, 508 p., 2 plates.

VERY SCARCE. An expanded edition of the same.

REFERENCES: BL: [726.k.85.]. • BMC: 2, 577 [wanting].

FISCHER VON WALDHEIM, Gotthelf. (BORN: Waldheim, Saxony, Germany, 15 October 1771; DIED: Moscow, Russia, 6 October 1853) *German naturalist*.

Waldheim received his M.D. from the University of Leipzig in 1798.

REFERENCES: ADB: 7, 84-5. • Büttner, Johannes W. E., *Fischer von Waldheim. Leben und Wirken des Naturforschers Johann Gotthelf Fischer von Waldheim (1771 bis 1853)*. Berlin, Akademie-Verlag, 1956. [Published as: *Freiberger Forschungshefte*, ; Bd. 15].. • DBA: I 322, 264-275; II 374, 318, 322; II 371, 58-59. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Poggendorff: 1, col. 753 & 1564. • WBI.

1676. — French, 1806 [Collection catalog].

Museum d'Histoire Naturelle et l'Universite Imperiale de Moscou, mis en ordre et decrit par G. Fischer. Tome 1er, contenant les mammiferes. Moscou, 1806.

4°: [10], 119 p., 8 plates.

FISCHER VON WALDHEIM

VERY SCARCE. This is apparently a description of the museum of natural history objects of the Imperial University of Moscow (now Moscow University). Fischer had a particular interest in minerals, and presumably there is an account of the mineral collection contained in this work.

1677. — French, 1806 [Collection catalog].

Museum Demidoff | [tapered rule] | Mis En Ordre Systématique Et Décrit | par | G. Fischer. | Conseiller antique, Professeur-Demidovien, Directeur du Muséum | de l'Université Imperiale de Moscou, et Membre de plusieurs | sociétés savantes. | [tapered rule] | Tome Second. | Minéraux Et Petrifications. | Avec 6 planches. | [tapered rule] | à Moscou, | Aux dépens du Propriétaire | a l'Imprimerie de l'Université Impériale. | 1806.

4°: π^9 A-Z⁴ Aa-Mm⁴ Nn³; 160ℓ.; [I]-XVIII, [1]-300, [2] p., frontispiece (showing panorama of the museum and grounds), 5 plates (one folding).

VERY RARE. The descriptive catalog of Pavel Grigorievich Démidoff's [see note below] mineral collection is given within this volume. It lists 3,850 specimens of minerals, rocks, fossils and gemstones that were contained within a general natural history cabinet. The plates illustrate minerals and fossils. The collection was subsequently acquired by the University of Moscow.

The description of the mineral collection is contained in the second volume. The first volume of the set contains a description of the library (Moscow, 1806; lxxiii, 275 p.) and volume 3 describes animals and plants (Moscow, 1817; xl, 326 p.). Apparently in 1817, after volume 3 appeared, the complete work was again reissued in Moscow and Leipzig (by Fleischer).

Pavel Grigorievich Démidoff. (BORN: 1738; DIED: 1821) *Russian naturalist, aristocrat & traveller.* Démidoff founded the botanical gardens of Moscow. His uncle, Akinfi Nikitich Démidoff [?-c1740] established the family's extensive gold, silver and copper mines. From this beginning Pavel inherited a collection of mineralized examples, to which he added other examples as well as a large library, and botanical and zoological examples. The whole collection was then donated to the University of Moscow where the remains are today located.

REFERENCES: Agassiz, *Bibliographia Geologiae*, 1848-54: 2, 420. • Bridson, *History of Natural History*, 1994: no. Bc582. • Freiesleben, *Uebersicht der Litteratur*, 1822: 184. • Murray, *Museums*, 1904: 3, 35. • Sinkankas, *Gemology Bibliography*, 1993: no. 2133. (Démidoff) Wilson, *History of Mineral Collecting*, 1994: 126 & 167.

1678. — French, 1809 [First edition].

Notice des fossils du Gouvernement de Moscou; Servant de programme pour inviter les membres de la Societe imperiale des naturalistes a la seance publique du 26 octobre. Moscou, Imprimerie de l'Universite imperiale, 1809.

8°: 36 p.

RARE. The Russian government wished to sponsor an examination of fossils found in the country. This is

a program to invite members of the *Societe Imperiale des Naturalistes* of Moscow to help with the work.

REFERENCES: LKG: XIV 773.

1679. — French, 1810.

Description des objets rares du Museum de l'Université Impériale de Moscou. Par Gotthelf de Fischer. Moscou, 1810.

2°: hand-colored plates.

RARE. Apparently, this is a description of the rarest objects of the Museum of the Imperial University of Moscow (now Moscow University). It includes descriptions of mineral specimens held in the collection.

REFERENCES: Freiesleben, *Uebersicht der Litteratur*, 1822: p. 184. • Murray, *Museums*, 1904: 3, p. 35.

1680. — Russian & French, 1811.

Система | Изкопаемых | Служащая Основанием Порядка, Въ Какомъ Расиоджены Они | въ Музеѣ | Императорскаго Московскаго | Университета. | Пзданная | Директоромъ Онаго, Профессоромъ И Кавалеромъ | Готтгелфомъ Фишеромъ. | [wavy rule] | Москва | Въ Универсишеской Типографіи, | 1811.

[FRENCH TITLE READS:]

Onomasticon | Du Système D'Oryctognosie | servant de base à l'arrangement des Minéraux du Muséum | De L'Université Impériale De Moscou. | par le Professeur | Gotthelf Fischer. | Directeur du Muséum. | [wavy rule] | Moscou. 1811 | de l'Imprimerie de l'Université Impériale.

4°: xx, 178 p.

RARE. The text is printed in both Russian and French. This is a textbook of Oryctognosie, or physical mineralogy, which provides accounts of the physical properties of minerals. It includes descriptions of various minerals, especially those found in Russia. It also provides a good reference to mineralogical nomenclature, especially between the French and Russian languages.

REFERENCES: BL: [726.e.11.]. • LKG: XIV 773.

1681. — French, 1816 [First edition].

Essai | sur la Turquoise et | sur la Calaité, | Par | Gotthelf Fischer, | [...17 lines of title and memberships...] | [wavy rule] | Imprimée aux frais des Frères Zozima. | Avec deux planches. | [ornate rule] | A Moscou, | de L'Imprimerie de L'Université Impériale. | 1816.

8°: [1]-46 p., 2 folding plates. Title taken from front wrap. Printed on a pale blue paper. PAGE SIZE: 204 x 122 mm.

CONTENTS: [1]-2], Title page, verso Russian text.; [3], Dedication.; [4], Blank.; [5]-46, Text.; [At end], 2 folding plates.

RARE. The first substantial scientific monograph on turquoise also known as calaité. Fischer reviews previous writers on the subject and provides a

bibliography of 30 entres on pages 11-13. Sinkankas provides a long description of this work.

REFERENCES: BL: [B.389.(8.)]. • Sinkankas, *Gemology Bibliography*, 1993: no. 2134.

1682. Second edition, 1818: Essai | sur la Turquoise | et | sur la Calaité, | Par Gotthelf Fischer, | Vice-Président de L'Académie Impériale | Médico-Chirurgicale. | Seconde Édition, | Imprimée aux frais des Frères Zozima, | Et Ornée de Trois Planches. | [ornament] | Moscou, | De L'Imprimerie d'Auguste Semen, | Imprimeur de L'Académie Impériale Médico-Chirurgicale. | [wavy rule] | M. DCCC. XVIII.

8°: [1]-3⁸; 24^l.; [1]-47, [1] p., 3 folding plates. PAGE SIZE: 200 x 120 mm.

CONTENTS: [1-2], Title page, verso Russian text.; [3], Dedication to Sir James Wylie.; [4], Blank.; [5]-47, "Essai sur la Turquoise et sur la Calaité."; [1 pg], Blank.; [At end], 3 folding plates.

RARE. Memoir on Persian turquoise, a gemstone known since ancient times. A bibliography containing 32 entries appears on pages 12-15.

REFERENCES: BL: [B.389.(12.)]. • NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 2135.

1683. — Russian, 1818 [No more published?].

Ориктогнозія, | Или | Краткое Описание | Всѣхъ | Ископаемыхъ Веществъ | Съ | Изъясненіемъ Терминовъ | Сочиненіе | Готтгельфа Фишера, | И.М.Х. Академіи Вице-Президенша. | Въ Пользу Учащихся Въ Оной Академіи. | [ornate rule] | Часть Первая. | [ornate rule] | Москва, | Въ Типографіи Имп. Мед.-Хир. Академіи. | [short rule] | 1818.

[TRANSLITERATED TITLE:]

Oriktognoziia, | Ili | Kratkoe Opisanie | VsEkh | Iskopaemykh Veshchestv | S Iz'iasneniem Terminov | Sochinenie | Gottgel'fa Fishchera, | I.M.Kh. Akademii Vitse-Prezidensha. | V Pol'zu Uchashchikhsia V Onoi Akademii. | [ornate rule] | Chast' Pervaia. | [ornate rule] | Moskva, | V Tipografi Imp. Med.-Khir. Akademii. | [short rule] | 1818.

8°: π^8 1-28⁸ 294; 235^l.; [i]-xiv, [1]-456 p. PAGE SIZE: 205 x 120 mm.

CONTENTS: [i-ii], Title page, verso "Напечатано по опредѣленію Московскаго ..."; [iii], Dedication.; [iv], Blank.; [v]-[viii], Text of dedication.; [ix]-xiv, "Оглавленіе | Первой Уасми | Ориктогнозіи."; [1], Sectional title page.; [2], Blank.; [3]-456, Text, with last line reading: "Конецъ Первой Части."

EXTREMELY RARE. This is a thorough examination of oryctognosie section of mineralogy that Fischer wrote as an advanced textbook. At Moscow University in first quarter of the nineteenth century, formal descriptive mineralogy was cultivated. Fischer led the charge, teaching the course in mineralogy, and preparing in 1818 a textbook, the Ориктогнозія, that bears all the features typical of a descriptive mineralogy. He follows Werner in his discussion of the characteristics, and divides the minerals into stones, salts, combustible substances, and metals. These classes are then broken down into families, which consist of several mineral forms. The account of the minerals given by Fischer are

so arduous and difficult that it is virtually impossible to determine the species described. A citation to a second volume published in 1820 has been seen, but no physical copy has been discovered to describe.

REFERENCES: BL: [no copy listed]. • CBN: [no copy listed]. • NUC: [no copy listed]. • Tikhomirov, *Geologiia v Rossii 19 Veka*, 1960-3: 2, p. 278-279.

1684. — French, 1837.

Oryctographie | Du | Gouvernement De Moscou, | Par | Gotthelf Fischer-De-Waldheim. | [...3 lines of titles and memberships...] | [ornate rule] | Ouvrage publié aux frais de la Société Impériale des Naturalistes de Moscou, | Accompagné de 62 planches et du portrait de l'auteur. | [ornate rule] | Moscou, | De L'Imprimerie D'Auguste Semen, | 1837.

4°: [4], xvii, 202 p., frontispiece portrait, 57 plates (7 colored), 5 maps. There is also a second titlepage, with the date 1830-37.

VERY SCARCE. Concerns the paleontology?? of Russia.

REFERENCES: BL: [1252.1.18.]. • NUC. • Ward & Carozzi, *Geology Emerging*, 1984: no. 812.

FLADE, Christian Gottlob.

1685. — Latin, 1791-2.

De re Metallica Midianitarum, Edomitarum et Phoenicum. Dissertatio I. [Dissertatio II]. Lipsiae, Officina Klaubarthia, [1791-2].

2 parts. [Part 1: 1791] 4°: 28 p.; [Part 2: 1792] 4°: 16 p. VERY SCARCE.

REFERENCES: BL: [726.d.5.(2.)]. • LKG: II 12. • Ward & Carozzi, *Geology Emerging*, 1984: no. 818.

FLADUNG, Joseph A.F.

1686. — German, 1819 [Collection catalog].

Versuch | über die | Kennzeichen der Edelsteine | und deren | vortheilhaftesten Schnitt. | Zum Theile nach der Beschreibung des Museums | des Herrn de Drée | mit Abänderungen und Vermehrungen | von | J.A.F. Fladung. | Nebst | einiem Verzeichnisse und einer Abbildung der aus= | geählten Edelstein=Sammlung, | des Herrn | J.F. von der Null. | [tapered rule] | Pesth, 1819. In Hartlebens Verlag.

8°: [6], I-IV, [6], [1]-138 p., frontispiece (folding; showing 82 figures of gemstone diagrams), 2 folding tables (printed on both sides and numbered pages 135/6 and 137/8). PAGE SIZE: 166 x 90 mm.

CONTENTS: [2 pgs], Title page, verso "Gemma est in parvis coacta naturae majestas | ..."; [1 pg], Dedication to J.F. van der Null.; [1 pg], Blank.; [2 pgs], Preface.; I-IV, "Vorrede."; [4 pgs], "Register."; [2 pgs], "Einschaltungen."; [1]-134, Text.; 135-138, 2 folding tables included in the pagination and printed on both sides that briefly describe the gemstones in Null's collection.

RARE. Separate description of the gemstones contained in J.F. van der Null's extensive mineralogical

FLETCHER

collection, which was fully described in 1804 by Friedrich Mohs [which see entry under]. The text of Fladung's work provides first a short introductory essay describing gemstones and their properties, second a systematic description of gemstones and third a description of gemstone technology. A full description of this book may be found in Sinkankas (1994).

REFERENCES: BL: [1255.a.14.]. • Sinkankas, *Gemology Bibliography*, 1993: no. 2143.



FLETCHER

FLETCHER, Lazarus. (BORN: Salford, England, 3 March 1854; DIED: London, England, 6 January 1921) *English physicist & mineralogist.*

Fletcher was educated at Oxford. From 1875 to '77, he was demonstrator at the Clarendon Laboratory, Oxford. He was elected a fellow of University College, Oxford University. From 1880 to 1909, Fletcher was keeper of the minerals of the British Museum, and from 1909 to 1919 he was director of the natural history departments of the museum.

REFERENCES: *Annual Register*. • Barr, *Index to Biographical Fragments*, 1973: 87. • BBA: I 412, 27-29; II 1477, 258-260. • Cleavelly, *World Palaeontological Collections*, 1983: 119. • *Geological Magazine*: 58 (1921), no. 3, 141-3 [by G.T. Prior]. • *Mineralogical Magazine*: 19 (1921), no. 92, 181-92, portrait [by H.A. Miers]. • Poggendorff: 3, 452, 4, 430-1, & 5, 374. • *Proceedings of the Geological Society, London*: 1921, p. lxvi-lxvii [by R.D. Oldham]. • Sarjeant, *Geologists*, 1980: 2, 1008. • Smith, *Seventy Years of Mineralogy*, 1982. • WBI. • *World Who's Who in Science*: 579.

1687. — English, 1881 [Bibliography].

British Museum (Natural History). | [double rule] | Catalogue | of the | Books | in the | Department of Mineralogy. | [rule] | Printed for the Trustees of the British Museum. | 1881.

8°: π^1 B⁷ C-G⁸ H⁵; 53 ℓ .; [1]-105, [1] p. PAGE SIZE: 210 x 135 mm.

CONTENTS: [1-2], Title page, verso printer's device, "Printed by Taylor and Francis ..."; [2]-93, "Catalogue of the Books in the Department of Mineralogy."; 94-98, "Periodicals. Journals and Transactions of Learned Societies."; 99-102, "Charts and Maps."; 103-105,

"Dictionaries, Catalogues, &c."—signed, p. 105, L. Fletcher, November 16th, 1881; [1 pg], Blank.

VERY RARE. An alphabetical catalog listing the contents of the library of the Department of Mineralogy, British Museum.

REFERENCES: BL: [011908.e.3.].

1688. — English, 1892.

The | Optical Indicatrix | And The | Transmission Of Light In Crystals. | By | L. Fletcher, M.A., F.R.S., | [...3 lines of titles and memberships...] | [rule] | London: | Henry Frowde, | Oxford University Press Warehouse, | Amen Corner. | [rule] | 1892.

8°: π^6 B-H⁸; 62 ℓ .; [i]-xii, [1]-112 p. PAGE SIZE: 212 x 134 mm.

CONTENTS: [i-ii], Half title page, "The Optical Indicatrix | And | The Transmission Of Light In Crystals," verso "London: | Printed By Williams And Strahan, | 7 Lawrence Lane, Cheapside."; [iii-iv], Title page, verso blank.; [v]-viii, "Contents."; [ix]-xii, "Introduction."—signed L. Fletcher, 31 March 1891.; [1]-112, Text.

VERY SCARCE. This tract originally appeared in the *Mineralogical Magazine*. The text covers theories of the speed of light transmitted through crystals. It consists of the following five chapters: (1) Recent change of view as to the properties to be assigned to an elastic luminiferous ether. (2) Evolution of the optical indicatrix. (3) Naturalness of the method. (4) Deduction of the optical characters corresponding to an ellipsoidal indicatrix. (5) Various optical relations which are independent of the physical character of the periodic change.

REFERENCES: BL: [8908.ee.49.]. • Dana's 7th (Bibliography): 70.

1689. — English, 1884.

A Guide | To The | Mineral Gallery | Of The | British Museum (Natural History), | Cromwell Road, South Kensington. | With An Introduction | To | The Study Of Minerals. | Printed By Order Of The Trustees, | 1884.

8°: 120 p.

RARE. This is a popular guide to the world class mineral gallery of the British Museum, London, England. This is the first appearance of the text written by Fletcher, which for the next 40 years would be slightly revised and edited and issued through 16 editions [which see notes below].

Other editions and issues:

1889: 8°: 120 p. [BL, 7106.b.43.]

1894: 8°: 120 p. [BL, 7106.b.49.]

1895: 8°: 123 p. [BL, 7106.b.51.]

1897: 8°: 123 p. [BL, 07107.g.4.]

1903: 8°: 123 p. [BL, 07107.g.14.]

1906, "10th edition". 8°: 123 p. [BL, 07107.g.30.]

1907, "11th edition". 8°: 123 p. [BL, 07107.h.43.]

1908, "12th edition". 8°: 123 p. [BL, 7109.e.42.]

1910, "13th edition". 8°: 123 p. [BL, 07107.g.51.]

1914, "14th edition". British Museum (Natural History) | Cromwell Road, London, S.W. | [rule] | Mineral Department. | [rule] | An Introduction | To The | Study Of Minerals | With A Guide To The Mineral Gallery. | By | L. Fletcher, M.A., F.R.S., | [...2 lines of titles and memberships...] | Fourteenth Edition. | [This Guide-book

can be obtained at the Museum: written applications for it | should be addressed to "The Director, Natural History Museum, | Cromwell Road, London, S.W." | [rule] | London: | Printed By Order Of The Trustees. | 1914. | (All rights reserved.). 8°: 123 p. [BL, 07106.g.17.]

1918, "15th edition". 8°: 123 p. [BL, 7106.b.74.]

1924, "16th edition". 8°: 71 p. [BL, 2249.d.13.]

REFERENCES: BL: [7104.b.6].

FOCK, Andreas Ludwig. (BORN: Böbs, Lübeck, Germany, 28 April 1856; DIED:) *German mineralogist.*

In 1880, Fock received his Ph.D. from Strasbourg, after which he was appointed assistant to P. GROTH in Strasbourg. In 1881, he became assistant to Landolt in Berlin. In 1885, Fock became a privatdocent at the University of Berlin.

REFERENCES: DBA: II 381, 80-85. • Poggendorff: 3, 455, 4, 433, 5, 375 & 6, ?? • WBI.

1690. — German, 1888.

Einleitung | In Die | Chemische Krystallographie | von | Dr. A. Fock, | Privatdozenten An Der Universität Zu Berlin. | [ornate rule] | Leipzig | Verlag Von Wilhelm Engelmann | 1888.

4°: viii, 126 p. SCARCE.

REFERENCES: BL: [07109.h.42.]. • Dana's 7th (Bibliography): 70.

1691. — German, 1890.

Krystallographisch-chemische Tabellen ... von Andreas L. Fock. Leipzig, Wilhelm Engelmann, 1890.

4°: vi, 94 p. SCARCE.

REFERENCES: BL: [07109.g.25.].

1692. English transl., 1895: An Introduction | To | Chemical Crystallography | By | Andreas Fock, Ph.D. (Berlin) | Lectures In The University Of Berlin | Translated And Edited By | William J. Pope | With A Preface By | N. Story-Maskelyne, M.A., F.R.S. | Professor Of Mineralogy, Oxford | Oxford | At The Clarendon Press | 1895.

8°: [4], [vii]-xvi, [1]-189, [3], 1-76 p.

CONTENTS: [2 pgs], Half title page, "An Introduction | To | Chemical Crystallography | Andreas Fock," verso "London ..."; [2 pgs], Title page, verso "Oxford..."; [vii]-xii, "Preface."; [xiii]-xiv, "Translator's Preface."; [xv]-xvi, "Contents."; [1]-184, Text.; [185]-186, "Index To Author's Names."; [187]-189, "Index To Subjects."; [1 pg], "Oxford..."; [1 pg], Advertisement.; [1 pg], Blank.; [1]-76, Publisher's list.

SCARCE. Translation by Sir William Jackson Pope, K.B.E. of *Einleitung in die Chemische Krystallographie* (Leipzig, 1888), together with introductory material by N. STORY-MASKELYNE.

"In 1888 Dr. Fock published the little treatise *Einleitung in die Chemische Krystallographie*, in which he summarised the results of recent investigation and the views deduced from them on the subject of crystal-growth in its relation to some chemical problems: and in the present small volume this admirable summary has been enlarged by additions necessitated by the advances made in this important subject since 1888."—*Preface*

REFERENCES: BL: [7109.aaa.30.]. • NUC. • USGS Library Catalog.

FOEHR, Karl Friedrich.

1693. — German, 1911.

Mineralogie | für | Ingenieure und Chemiker | von | Dipl.-Ing. Prof. Dr. Foehr | Dozent der Mineralogie am Städt. Friedrichs-Polytechnikum Goethen | Mit 145 Abbildungen | [ornament] | Leipzig | Verlag von S. Hirzel | 1911.

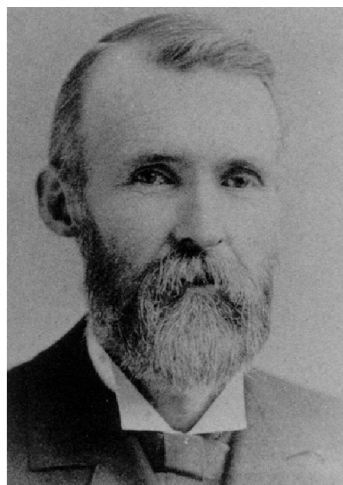
8°: xvi, 173, [1] p., 145 illus.

VERY SCARCE. A short introduction to mineralogy for engineers and chemists.

REFERENCES: NUC.

FOND, Barthélemy Faujas De Saint.

See: Faujas De Saint-fond, Barthélemy.



ALBERT EDWARD FOOTE

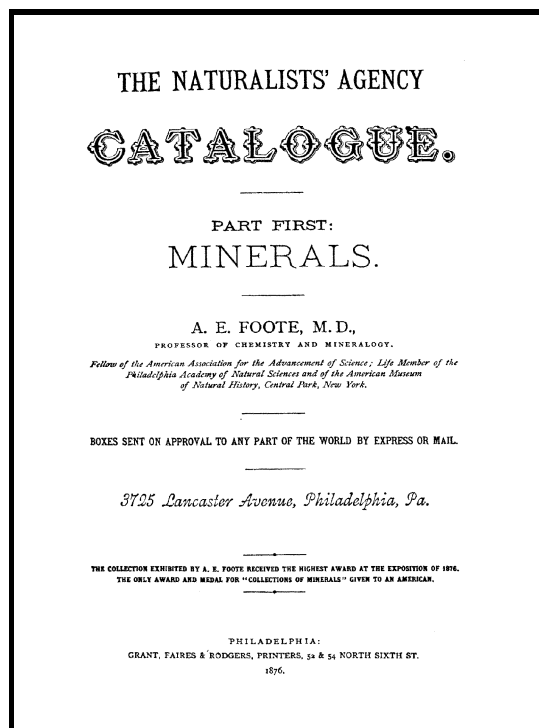
FOOTE, Albert Edward. (BORN: Hamilton, New York, U.S.A., 6 February 1846; DIED: Atlanta, Georgia, U.S.A., 10 November 1895) *American chemist, mineral collector & dealer.*

Father of the mineral dealer and businessman, WARREN MATHEWS FOOTE. A.E. Foote was professor of chemistry at Iowa Agricultural College. However, in the mid-1860's, he began collecting mineral specimens from the mines of Michigan, causing Foote to establish a mineral dealing business in Philadelphia. Eventually, the name of Foote became famous for his large inventory of worldwide minerals, which were labeled and sold or traded to mineralogists at all levels.

REFERENCES: *American Journal of Science*: 3rd series, 150 (1895), 434. • Bideaux, R.A., "Collector's Corner: A.E. Foote," *Mineralogical Record*, 4 (1973), 192-4. • Cleevely, *World Palaeontological Collections*, 1983: 120. • Foote, A.W., *Foote Family, comprising the genealogy and history of Nathaniel Foote of Wethersfield, Connecticut*. Rutland, Vermont, Marble City Press, 1907: p. 17 & 463. • Francis, C.A., "Development of the Amherst College Collection," *Mineralogical Record*, 5 (1974), 190-2. • Haynes, *American Chemical Industry, 1945-54*: 6, 167-8. • Heitner, H.I., "Dr. Foote and his minerals," *Matrix*, 1 (1988), no. 5, 70-73, portrait, 2 figs. • Kraus, E.H., "Albert E. Foote, the naturalist-a Michigan alumnus," *Michigan Alumnus Quarterly Review*, 64 (1958), no. 21, 342-7, illus. • Kraus, E.H., "Albert E. Foote, M.D., Naturalist," *Earth Science*, 14 (1961), no. 1, 6-68 & 78, 3 figs. (including portrait). • Kunz, George F., "Memoir of Albert E. Foote," *Bulletin of*

FOOTE

the *Geological Society of America*, 7 (1896), 481-6, biblio. • Lambrecht & Quenstedt, *Catalogus*, 1938: 143. • *Mineral Collector*: 2 (1895), no. 9, 144. • *Mineralogical Magazine*: 11 (1896), 146. • *Nature*: 53 (1895/6), 12. • Poggendorff: 1, cols. 1016-7. • Sarjeant, *Geologists*, 1980: 2, 1016-7. • Toothaker, C.R., "The days of A.E. Foote," *Rocks and Minerals*, 26 (1951), nos. 9-10, 460-3.



NATURALIST'S AGENCY CATALOGUE, 1876

1694. — English, 1876 [First edition].

The Naturalist's Agency | Catalogue. | [rule] | Part First: | Minerals. | [rule] | A.E. Foote, M.D. | Professor Of Chemistry And Mineralogy. | [...3 lines of titles and memberships...] | [rule] | Boxes Sent On Approval To Any Part Of The World By Express Or Mail. | [rule] | 3725 Lancaster Avenue, Philadelphia, Pa. | [ornate rule] | The Collection Exhibited By A.E. Foote Received The Highest Award At The Exposition Of 1876. | The Only Award And Medal For "Collections Of Minerals" Given To An American. | [ornate rule] | Philadelphia: | Grant, Faires & Rodgers, Printers, 52 & 54 North Sixth St. | 1876.

8°: [i]-iv, [5]-48 p., frontispiece (showing various mineral specimens), illus., tables. PAGE SIZE: 240 x 152 mm.

CONTENTS: [Frontispiece].; [i-ii], Title page, verso copyright information.; iii-iv, "Of General Interest."; 5-48, Text.

RARE. All published? By the early-1870's Foote had formed an extensive personal mineral collection, part of which had been privately exhibited in New York in 1873. Probably based upon his reception there, he moved in 1875 to Philadelphia and prepared for the 1876 Centennial Exposition that took place in that city. Within the show he exhibited his best specimens, for which he won an award, while outside he sold his surplus specimens from a building rented just outside the Exposition grounds. This business was not exclusively minerals, but included shells, other natural history specimens, scientific instruments and second-hand scientific books. The catalogue described above describes the types of minerals Foote had for sale during this period. No trace has been found of other catalogue parts that might have been published.

REFERENCES: NUC: 177, 304 [NF 0230352].

1695. 5th edition, 1880: Catalogue | Of | Minerals And Tables Of The Species. | A.E. Foote. | Professor Of Chemistry And Mineralogy. | [...3 lines of titles and memberships...] | Fifth Edition, Revised, Corrected And Much Enlarged. | Main Stock | At 1223 Belmont Avenue, Philadelphia, Pa. | [...12 lines of text...] | [ornament] | July, 1880. | Morrell Brothers, Steam Power Printers, 123 South Third Street, Philadelphia.

8°: [2], [1]-96, [2] p., illus. In printed wraps that are included in the pagination. PAGE SIZE: 240 x 156 mm.

CONTENTS: [In paper wraps:] [2 pgs=front wrap], Title page, verso "Index To Mineral Catalogue."; [1]-96, Text.; [2 pgs=back wrap], Continuation of contents and a list of illustrations, verso map to shop in Philadelphia.

RARE. "In preparing this Catalogue it has been my aim to make it of such value that no chemist or mineralogist, whether amateur, student or Professor of Mineralogy or Chemistry, would feel as if he could afford to be without it, and in doing this I have spared no expense, either in the way of illustration or labor."—Introduction.

The first part provides testimonials to Foote's integrity, as well as shipping directions and views on crystallization. Descriptions of various collections and individual species are than provided. The physical properties of the individual species are also provided. Scattered throughout are reprints of articles about some of the species offered for sale. A comprehensive catalogue.

1696. 6th edition, 1884: Catalogue | Of | Minerals. | [rule] | A.E. Foote, | No. 1223 Belmont Ave., Philad'a, Penna. | [rule] | Sixth Edition. | [rule] | [ornament] | [...7 lines of text...] | [short rule] | — 1884. —

8°: [1]-97, [1], [44] p. There are also blank pages in the book, probably to make notes. PAGE SIZE: 152 x 232 mm.

CONTENTS: [1], Title page.; [2], "Index."; [3]-[97], Text beginning "Of General Interest."; [1 pg], Map showing directions to the shop.; [2 pgs], Blank.; 44 pages of tables listing mineral species and their properties that are printed on one side of the page and interspersed with blank pages so the reader might add notes.

RARE. The catalog text proper consists of 98 pages, which is followed by another 44 page section that is a price list of species and the leading varieties of cabinet specimens. There are blank pages scattered throughout the book, probably to make notes, as well as several mineral illustrations.

REFERENCES: NUC.

1697. 7th edition, 1886: Catalogue | Of | Minerals. | [rule] | A.E. Foote, No. 1223 Belmont Ave., Philad'a, Penna. | [rule] | Seventh Edition. | [rule] | [ornament] | [...7 lines of text...] | [rule] | 1886.

8°: [1]-96 p. In paper wraps. PAGE SIZE: 230 x 150 mm. RARE.

CONTENTS: [1], Title page.; [2], "Index."; [3-4], "Of General Interest."; [5]-96, Text.

1698. 8th edition, 1889: [On the front wrap:] Catalogue | Of | Minerals. | [rule] | A.E. Foote, | No. 1223 Belmont Ave., Philadelphia, Pa. | [rule] | Eighth Edition. | [rule] | [ornament] | [...8 lines of text...] | [rule] | 1889.

8°: [1]-[78] p. In paper wraps. Only pages 33 to 56 are numbered. PAGE SIZE: 230 x 150 mm. RARE.

CONTENTS: [1], Title page.; [2], "Index."; [3], "Of General Interest."; [4]-[78], Text.

1699. 9th edition, 1892: [Contained within a double rule box:] Catalogue Of | Minerals | And | Mineralogical Books | A.E. Foote, | 4116 Elm Avenue, Philadelphia, Pa., U.S.A. | [ornament] | Ninth Edition. | 1892. | [rule] | [...8 lines of text...].

8°: [2], 1-128 p., frontispiece, illus., plates, diagrs. PAGE SIZE: 236 x 147 mm. RARE.

CONTENTS: [2 pgs], Title page, verso blank.; 1-128, Text.

REFERENCES: NUC: 177, 304 [NF 0230350].

FOOTE, Warren Mathews. (BORN: Ames, Storey County, Iowa, U.S.A., 27 December 1872; DIED: 1936) *American mineral dealer & businessman.*

Son of ALBERT EDWARD FOOTE. Warren Foote received his B.S. in chemistry from the University of Pennsylvania in 1894. He was a trustee of his father's estate from 1895 until 1916 when he became president and general manager of the Foote Mineral Company. Foote held membership in the American Academic Association for the Advancement of Science.

REFERENCES: ABA. • Kraus, E.H., "Albert E. Foote, the naturalist-a Michigan alumnus," *Michigan Alumnus Quarterly Review*, 64 (1958), no. 21, 342-7, illus. • Poggendorff: 1, cols. 1016-7. • Sarjeant, *Geologists*, 1980: 2, 1017.

1700. — English, c1898 [10th edition].

A | Complete Catalogue | of | Minerals | [rule] | Compiled by Warren M. Foote | [rule] | Containing Useful Lists and Tables of Reference, with Specimen | Prices of All Common and Many Rare Minerals. For the | Use of Teachers, Students, Collectors and others | Interested in Mineralogy and its | Practical Applications | [rule] | 186 Pages, Illustrated by 40 Photo-Engravings | Published By | Dr. A.E. Foote | 1317 Arch Street, Philadelphia, Pa. | U.S.A. | [rule] | Prices, postpaid: Bound in Paper, 25c.; Cloth, 50c.; Calf, interleaved, \$1.00 | Price Lists and Sample Pages of this Catalogue mailed on application.

8°: [1]-187, [1] p., illus., tables, index. Issued in paper wraps, cloth and leather bindings. PAGE SIZE: 230 x 150 mm.

CONTENTS: [1], Title page.; 2, "Contents."; 3, "Introduction."; [4], "To Purchasers."; 5-43, "I. New Minerals."; 44-78, "II. Collections."; 79-84, "III. Minerals Sold By Weight."; 85-87, "IV. Meteorites."; 88-90, "V. Gems and Polished Specimens."; 91-99, "VI. Books on Mineralogy and Geology."; 100-105, "VII. Mineralogical Supplies."; 106-126, "VIII. Alphabetical Index and Price List."; 128-177, "IX. List of All Known Minerals Classified according to Dana. ("System of Mineralogy, Sixth Edition, 1892") with Complete Supplement."; 178-185, "X. Metallic Classification of Minerals."; 186-187, "Index."; [1 pg], Blank.

SCARCE. Lists mineral species and varieties with a concise summary of their composition and form according to the generally accepted system of classification given by EDWARD S. DANA in his *System of Mineralogy* (6th ed., New York, 1892). Also included is a composition list ordering the minerals according to the most prominent metal which they contain. Numerous half-tone plates taken from photographs give satisfactory reproductions of the actual appearance of the specimens.

Supplement, 1899: *First Supplement to the Complete Mineral Catalogue. "New Species List" of All Minerals Discovered since September, 1897 ... Compiled by Warren M. Foote. ...* [Philadelphia, Pa., A.E. Foote, 1899]. 8°: [1]-18 p., illus.

REFERENCES: *American Journal of Science*: 4th Series, 5 (1898), 155-6. • NUC: 177, 361 [NE 0231754].

1701. c1901: Catalog | Of | Collections of Minerals | [rule] | ... A.—Standard Collections, Evenly covering the Science. | Advanced and Elementary. | B.—Economic; Including series of Ores for Miners, Pros- | pectors and Engineers. | C.—Miscellaneous Elementary Collections ... D.—Crystallography ... E.—Series Illustrating Hardness, Color, Specific Gravity | and Other Physical Characters of Minerals. | F. Sets of Minerals for Blowpipe Practice ... Foote Mineral Co. ...

8°: [1]-58, [8] p. PAGE SIZE: 232 x 150 mm. SCARCE.

CONTENTS: [1-2], Title page, verso blank.; [3], "Ashow Room in the Philadelphia Store—Foote Mineral Co."; [4], "View in the Paris Store—Foote Mineral Co."; [5], "Note."; [6], "To Purchasers."; [7]-58, Text.; [1 pg], "Single Specimens For Study."; [1 pg], "Minerals Purchased Or Exchanged."; [1 pg], "Shipping Directions."; [5 pgs], Plate VIII to Plate XIII.

1702. 11th edition, c1904: Complete Mineral | Catalog | Compiled by W.M. Foote | [rule] | Part I | Mineral Collections and Material for the Laboratory | Part II | Descriptive Account of Choice Specimens. Meteorites. | Price List of Individual Specimens. Classified Table | of Minerals according to Dana's System, | with Index. Metallurgical Classifi- | cation of Minerals | [rule] | Rare Minerals for Manufacturing Purposes Supplied | in Commercial Quantities | See Page 98 | [rule] | 216 Pages, Illustrated | [rule] | Published by the | Foote Mineral Company | 1317 Arch Street, Philadelphia, Pa. | U.S.A. | Prices, postpaid: Bound in Paper 25c., Flexible Cloth, 50c. | Price Lists and Mineral Collection Catalogs free.

8°: [1]-215, [1] p., 28 photographic plates (labelled I-XVIII), illus. PAGE SIZE: 230 x 150 mm.

CONTENTS: [1 pg], Title page.; [2], "Contents."; [3], "Note."; [4], "Free Delivery Throughout the World."; 5-215, Text.; [1 pg], Blank.

SCARCE. "In this new edition of our catalog of collections, the various lists have been corrected and revised to accord with the latest and most practical educational requirements, and similarly, with the steady growth of our large stock."—*Note*.

The catalog covers all manner of items needed by the mineral collector. It is divided into two major sections. The first covers display cases, standard collections ranging from elementary to advanced, precious stones, geological specimens, crystallography and laboratory supplies. The second, lists various mineral species and sizes available on an individual basis, including rare element minerals, fine cabinet specimens and meteorites.

REFERENCES: NUC: 177, 361 [NE 0231755].

1703. 12th edition, 1909: Complete Mineral Catalog | Compiled By W.M. Foote | Twelfth Edition, Entirely Revised And Enlarged | With Three Hundred Figures And Plates | Cover Illustration Iodyrite | Published By The | Foote Mineral Company | 107 North 19th Street,

FORSIUS (Helsingforsius)

Philadelphia, Pa., U.S.A. | Established 1876 By Dr. A.E. Foote | — 1909 —

8°: [1]-319, [1] p., 9 plates, illus., diagrs. PAGE SIZE: 232 x 150 mm.

CONTENTS: [1], Blank.; [2], "Quality | is assured | as we | permit | return of | specimens | at our | expense."; [3], Title page.; [4], "Contents."; [5]-319, Text.; [1 pg], "Index."

SCARCE. The last edition of a catalog describing all sorts of mineral specimens and related items available from this famous firm at the beginning of the century. The text is divided into eight sections. Part I is "Introductory" describing terms, quality, labels, sizes of specimens and drawer cabinets. Part II covers "Advanced Systematic Collections," being a concise description of Dana's *System of Mineralogy* (6th ed., New York, 1892). Part III is an "Index to Complete Type Collections." Part IV describes "Elementary Systematic Collections." Part V covers "Economic Mineralogy, Industrial Minerals and Ores." Part VI is devoted to "Crystallography and Loose Crystals for Measurement and Study." Part VII lists collections used in "Physical Mineralogy," such as hardness, structure, color and the effect of Radium. Part VIII covers "Chemical Mineralogy."

REFERENCES: NUC: 177, 361 [NE 0231756].

FORD, William Ebenezer. (BORN: Westville, Connecticut, U.S.A., 18 February 1878; DIED: ??, 23 March 1939) *American mineralogist.*

REFERENCES: *World Who's Who in Science*: 588.

1704. 5th Text Revision, 1912: Dana's Manual | Of Mineralogy | For The Student Of Elementary Miner- | alogy, The Mining Engineer, The | Geologist, The Prospector, | The Collector, Etc. | By William E. Ford | [...2 lines of titles and memberships...] | Thirteenth Edition, | Entirely Revised and Rewritten | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited | 1912.

8°: 460 p., 357 illus., 10 plates.

SCARCE. In 1912, William E. Ford [1878-1939] completely revised and rewrote the text. This text was then reissued as the 13th edition until 1928, when Ford revised the text for a 14th edition. In 1938, Cornelius S. Hurlbut [1906-] again revised the text, and it was issued as the "Fifteenth Edition" in 1941.

REFERENCES: NUC: 132, 180-90.

1705. 6th edition, appendix 3, 1915: Third Appendix | To The | Sixth Edition | Of | Dana's System Of Mineralogy | By | William E. Ford | Assistant Professor Of Mineralogy, Sheffield Scientific School Of | Yale University | Completing the Work to 1915 | New York | John Wiley & Sons | London: Chapman & Hall, Limited | 1915.

[2], [i]-xiii, [1], 1-87, [1] p., biblio., illus.o signature marks indicated. PAGE SIZE: 260 x 165 mm.

CONTENTS: [1 pg], Blank.; [1 pg], Publisher's list of works concerning Dana's Mineralogies.; [i-ii], Title page, verso "Copyright, 1915, | By | Edward S. Dana. | ..."; iii-iv, "Prefactory Note."—dated 1 June 1915.; v-vii, "Introduction. | [rule] | Bibliography."; [viii], Blank; ix-xiii, "Classified List Of New Names."; [1 pg], Blank.; 1-87, "Appendix III."; [1 pg], Blank.

SCARCE. All new minerals described between January 1, 1909 to January 1, 1915 are included. Of these about sixty are new species. The most important development during this period was the use of X-rays as a means to study the molecular structure of crystals.

A Text-Book of Mineralogy with an Extended Treatise on Crystallography and Physical Mineralogy by Edward Salisbury Dana ... Third edition, revised and enlarged by William E. Ford. (New York, 1922 and other editions).

See: Dana, Edward Salisbury.

FORSIUS (Helsingforsius), Sigfrid Aronius. (BORN: Helsingfors, Finland, c1550; DIED: Stockholm, Sweden, Before 24 June 1624) *Finnish cleric, astronomer, naturalist & writer.*

It is recorded that Forsius had a wide ranging knowledge of scientific subjects, especially astronomy. In April, 1595 he was among the first to enter the newly established University at Uppsala, but within a year he had entered the army. By 1605, he traveled to Germany to further his education. He returned to Uppsala in 1608 to accept an astronomical professorship. But within a few years he accepted a position at a local church. Forsius was a prolific and wide ranging writer, authoring numerous almanacs and scientific works.

REFERENCES: *Biographiskt Lexikon*. • *Finsk Biografisk Handbok*: 1, cols. 657-9. • Frängsmyr, *Geologi och Skapelsetro*, 1969: 29, 46, 117, 119 & 125. • *ISIS*, 1913-65: 1, 427. • Lindroth, *Paracelsismen i Sverige*, 1943. • Olsson, *Kemiens Historia i Sverige*, 1971: p. 31-4. • *Oma Maa*, 1907-12: 4, 373-9 [by T. Rein]. • Poggendorff: 1, col. 775. • Rein, T., "Sigfrid Aronius Forsius," *Oma Maa* 4. *Porvoo*, 1907-1912, p. 373-9, 1 fig. • *Sarjeant, Geologists*, 1980: 2, 1024. • SBA: Scandinavian Biographical Archive: B-079, 234-260. • *Svenskt Biografiskt Handlexikon*: 1, 350-1, portrait. • *Svenskt Biografiskt Lexikon*: 16, 328-32. • WBI.



MINEROGRAPHIA, 1643

1706. — Swedish, 1643.

[In red:] MineroGRAPHIA, | [in black:] Thet år | [in red:] Mineralers/ | [in black:] äthskillighe Jordeslags/ Me= | tallers eller Malmars och Ed= | le Steenars Beskrifvelse. | [in red:] Aff förnæmlige Authoribus | [in black:] sammanhåmpat/ och medh | flijt disponerat | [in red:] Uthi Tree Böcker/ |

[in black:] Aff | [in red:] M. Sigfrido Arono | [in black:] Forsio. | [in red:] Nu medh eghen bekostnade oplagdt | [in black:] och aff Trycket förfärdigat. | [ornament] | [in red:] J Stockholm/ hoos Ignattum | [in black:] Meurer/ Åhr 1643.

8°: A⁸ 2A⁸ B-M⁸; 88ℓ.; [16], [1]-160 (i.e., 190), [2] p., woodcut printer's device. Title page in red and black. PAGE SIZE: 138 x 82 mm.

CONTENTS: [2 pgs], Title page, verso woodcut printer's device.; [4 pgs], Dedication, dated 9 October 1643.; [10 pgs], "Register på alle the Mineraler, och Edelsteenar | ..."; [1]-160 (i.e., 190), Text.; [1 pg], "Stockholm/ | [ornament] | Tryckt hoos Ianatium Meurer/ | medh eghen bekostning/ | Åhr/ 1643."; [1 pg], Blank.

RARE. The manuscript from which this book was printed was originally written in 1613, and the work itself appeared a few decades after Forsius' death. In all of his writings Forsius was devoted to the theories of Paracelsus. The *Minerographia* is an expansion of a chapter and other material that made its first appearance in the author's *Physica* (Stockholm, 1611), which was Forsius' description of creation. In this book he comprehensively explains his theories about minerals, rocks and stones, with particular reference to their use in medicine. He presents a classification of minerals that follows in its essentials the system first proposed by ANDREA CESALPINO and divides the subject into Terræ, Mineralia, Metalla, Mineralia a metallis nata, and Lapides.

Facsimile reprint: Edited by A. Laitakari. Forssa, 1973.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: p. 27. • BL: [987.b.22]. • Borgstrom, *Geschichte der Geologie in Finnland*, 1942: [p. 415-6]. • Collijn, *Sveriges Bibliografi*, 1600-Talet, 1942-6: 1, 272. • Dana's 7th (Bibliography): 70. • Forsius, A., "Sigfridus Aronus Forsiuxen Minerographia," *Bibliophilos*, 3 (1982), 65-70. • Internet search. • Laitakari, *Geologische Bibliographie Finnlands*, 1934: pp. 43-4. • LKG: III 48. • Oma Maa, 1907-12: pp. 373-79, 1 fig. • Wallerius, *Brevis Introductio*, 1779. • Ward & Carozzi, *Geology Emerging*, 1984: no. 845.



JOHANN REINHOLD FORSTER

FORSTER, Johann Reinhold. (BORN: Dirschau, Germany, 22 October 1729; DIED: Halle/Saale, Germany, 9 December 1798) *German naturalist of Scottish heritage.*

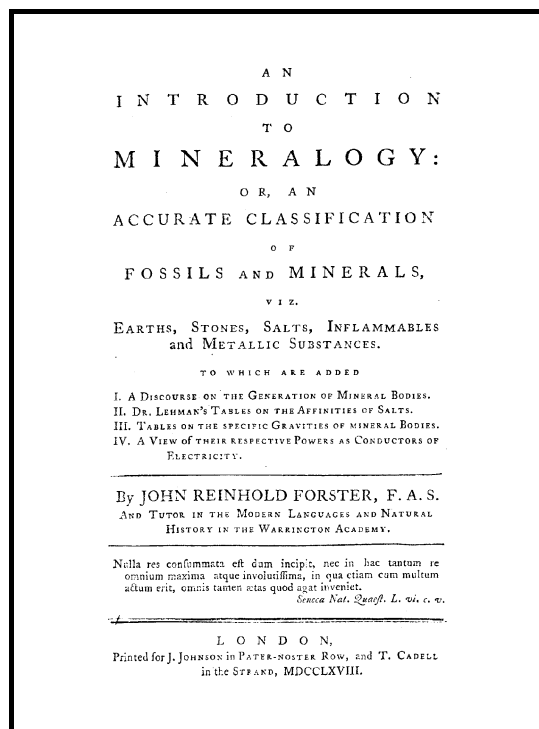
Father of the renowned naturalist Johann Georg Adam Forster [1754-1794], Johann Reinhold was a man of great scientific attainments, but an intractable temper. Commissioned by empress Catherine to survey the Russian colonies of Saratov province, Forster quarreled with the government and left with his family for England. There he obtained a position as instructor of natural history and modern languages at the nonconformist academy at Warrington. His temper soon compelled him to resign this appointment, and was forced for several years to earn a living publishing translations. An invitation to accompany Captain Cook on his third voyage around the world was accepted on the condition that his son, Johann Georg Adam be his assistant. The account of these travels was published by the son as *A Voyage round the World* (London, 1777; German, Berlin, 1778-80), which is considered the "first example of the glowing yet faithful description of natural phenomena which has since made a knowledge of them the common property of the educated world." [*Encyc. Brit.*] After returning to England, Johann Reinhold landed in debtor's prison, but was released after receiving a professorship at the University of Halle, where he remained the rest of his life.

REFERENCES: ADB: 7, 166-72. • *Australasian Biographical Archive*: 123, 288-305. • BBA: I 418, 286-309; II 1480, 326. • *Catalogue of Portraits of Naturalists*: 440-1 [4 portraits listed]. • DBA: I 334, 101-240; II 385, 168-192. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1663-8 & 6111. • DSB: 5, 76-7 [by M.E. Hoare]. • *Encyclopaedia Britannica*, 11th edition. • Hoare, M.E., "Johann Reinhold Forster (1729-1798)," *Problems of Natural History*, 6 (1971), 1-8. • Hoare, M.E., "Johann Reinhold Forster-The Neglected 'Philosopher' of Cook's Second Voyage (1772-1775)," *Journal of Pacific History*, 2 (1967), 215-24. • Hoare, M.E., "A strange and eventful history: the scientific correspondence of J.R. Forster (1729-98)," *Records of the Australian Academy of Science*, 2 (1972), no. 3, 76-77. • Hoare, M.E., "'Ulysses' or 'incubus'?" J.R. Forster's first period in England, 1766-1772," *Journal of the Society for the Bibliography of Natural History*, 7 (1976), no. 4, 375-383. • *ISIS*, 1913-65: 1, 427. • NDB: 5, 301-2 [by G. Steiner]. • Poggendorff: 1, cols. 775-6. • Sarjeant, *Geologists*, 1980: 2, 1026-7, Suppl. 1 (1986), 1, 423-4 & Suppl. 2 (1995), 1, 625. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: 1, 859-61. • WBI. • *World Who's Who in Science*: 589-90.

1707. — English, 1768.

An | Introduction | to | Mineralogy: | or, an | Accurate Classification | of | Fossils and Minerals, | viz. | Earths, Stones, Salts, Inflammables | and | Metallic Substances. | To which are added | I. A Discourse on the Generation of Mineral Bodies. | II. Dr. Lehman's Tables on the Affinities of Salts. | III. Tables on the specific Gravities of Mineral Bodies. | IV. A View of their respective Powers as Conductors of Electricity. | [rule] | By Johann Reinhold Forster, F.A.S. | And Tutor in the Modern Languages and Natural | History in the Warrington Academy. | [rule] | [...3 lines of Latin quotation, signed Seneca...] | [rule] | [rule] | London, | Printed for J. Johnson in Pater-Noster Row, and T. Cadell | in the Strand, MDCCLXVIII.

8°: π⁴ B¹ A²³ C-M² N-S⁴; 52ℓ.; [3], [1], [1]-3, [1],



AN INTRODUCTION TO MINERALOGY, 1768

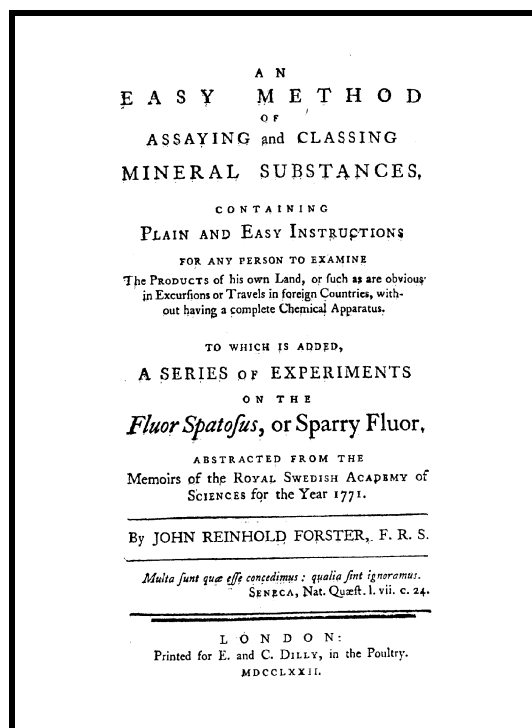
[1]-96 p. PAGE SIZE: 205 x 122 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to the President and Vice President of the Warrington Academy, signed John Reinhold Forster.; [1 pg], Blank.; [1]-3, "Advertisement."—dated 1 March 1768.; [1 pg], Blank.; [1]-2, "Introduction."; 3-69, Text.; [70]-85, "Halotechnia: | or, | Tables on the Affinities of Salts: | Translated from the Latin of Dr. John Gottlob Lehmann."; [86]-93, "A Table | of the | Specific Gravities | of | Mineral Bodies, collected from Various Authors."; [94]-96, "A View | of the | Mineral Bodies | considered as | Conductors of Electricity, | taken from | Dr. Joseph Priestley's History of Electricity."

RARE. In the Advertisement, Forster describes his disappointment at not finding a suitable textbook in English to teach mineralogy. He recounts problems with the previous publications of Webster, Hill, Woodward, and Da Costa, and continues, "I found myself under the necessity of drawing up a short sketch of my own, adapted in the best manner I could imagine to the use of my class." Forster then describes how Lehmann presented him with a copy of his "Tables" when Forster visited St. Petersburg several years before. This book, meant to be the first volume of a general natural history (never completed), attempts to classify minerals on a purely chemical basis. It also discusses the generation of mineral bodies, including theories on the general structure of the earth. The relationship between various salts is described in a series of tables translated from Johann Gottlob Lehmann's *Kurzer Entwurf einer Mineralogie* (2nd ed., Berlin, 1760). Other tables show the specific gravities of various minerals. The volume

closes with a consideration of the electric conductivity of minerals based on Joseph Priestley's *History of Electricity* (1st ed., London, 1762).

REFERENCES: *Berlinische Sammlungen*: 3, 642 & 6, 491. • BL: [T.282.(4.)]. • Dana's 7th (Bibliography): 70. • *Gaz. Litt. de l'Eur.*: (Nov., 1768), 170. • *Journal encyclopédique*: 4 (1768), 144 & 6 (1769), 145. • LKG: XII 63.



AN EASY METHOD OF ASSAYING, 1772

1708. — English, 1772.

An | Easy Method | of | Assaying and Classing | Mineral Substances, | containing Plain and Easy Instructions | for any person to examine | The Products of his own Land, or such as are obvious | in Excursions or Travels in foreign Countries, with- | out having a complete Chemical Apparatus, | to which is added, | A Series of Experiments | on the | Fluor Spatosus, or Sparry Fluor. | Abstracted from the | Memoirs of the Royal Swedish Academy of | Sciences for the Year 1771. | [rule] | By John Reinhold Forster, F.R.S. | [rule] | Muta sunt quae esse concedimus; qualia sint ignoramus. | Seneca, Nat. Quaest. l. vii. c. 24. | [rule] | [rule] | London: | Printed for E. and C. Dilly, in the Poultry. | MDCCLXXII.

8°: π¹ B-C⁸ D⁶; 23ℓ.; [2], [1]-44 p. PAGE SIZE: 205 x 122 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-44, Text.

VERY SCARCE. The book begins with an account of the apparatus and precautions necessary for successful chemical analysis of minerals. This is followed by analytical descriptions of minerals classified under the headings of Earthy and Stony, Saline, Inflammable and Metallic. At this point, with its own title page, is the section concerning Sparry Fluor, today known as the mineral Fluorite. Originally authored by the Swedish chemist Carl William Scheele [1742-1786] and published in the *Memoirs* of the Royal Swedish Academy for 1771, this paper describes a series of interesting chemical investigations performed on samples of Sparry Fluor. These experiments include its combination with alkali and saline media, and the creation of hydrofluoric acid upon its reaction with hydrochloric acid.

REFERENCES: BL: [953.e.6.(2.)]. • Dana's 7th (Bibliography): 70. • Hoover Collection: no. 317. • Kress Catalogue: no. 10859.3. • LKG: XII 64.

1709. — Latin, 1795.

Onomatologia nova systematis oryctognosiæ, vocabulis latinis expressa a Joanne Reinholdo Forster ... [Halle,] Typis Orphanotropei Halensis, 1795.

2°: 3 p.

EXTREMELY RARE. Concerns the nomenclature of oryctognosy.

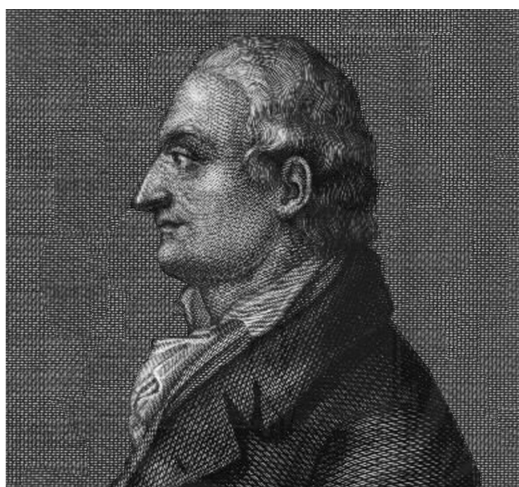
REFERENCES: BL: [B.348.(3.)]. • LKG: VII 3.

Tiberius Cavallo ... Mineralogische Tafeln, welche sowohl die Systematische Anordnung ... uebersetzt von Johann Reinhold Forster ... (Halle, 1786).

See: Cavallo, Tiberius.

Tiberius Cavallo ... Mineralogische Tafeln, welche sowohl die Systematische Anordnung ... uebersetzt, verbessert und vermehrt in dieser zweiten Auflage von D. Johann Reinhold Forster ... (Halle, 1790).

See: Cavallo, Tiberius.



FORTIS

FORTIS, Alberto. (BORN: Padova, Italy, 9 November 1741; DIED: Bologna, Italy, 21 October 1803) *Italian abate & geologist.*

Fortis was a Catholic clergyman, naturalist, bibliophile, and much-published author. He lived first in Rome, then later after many travels, he eventually became a librarian in Bologna. Fortis was a member of the Società Italiana and the Academy at Padua.

REFERENCES: ABI: I 425, 386-438; II 249, 91-97; 249, 121. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 441 [1 portrait listed]. • Ciancio, L., *Autopsie della terra illuminismo e geologia in Alberto Fortis (1741-1803)*. Firenze, L.S. Olschki, 1995. 385 p., illus. [Published as: *Biblioteca di Nuncius*, no. 18; ISBN 88-222-4331-5]. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • Frati, *Dizionario Bio-bibliografico Italiani*, 1933. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Parenti, *Aggiunte al Dizionario*, 1952-60. • Poggendorff: 1, cols. 778-9. • WBI. • Wolff, L., "The Enlightened Anthropology of Friendship in Venetian Dalmatia: Primitive Ferocity and Ritual Fraternity Among the Morlacchi," *Eighteenth-Century Studies*, 32.2, Winter 1998-1999, ??-??. [Subjects include Fortis, Alberto, 1741-1803. Viaggio in Dalmazia.].

1710. — Italian, 1771.

Saggio d'osservazioni sopra l'Isola di Cherso ed Osero, d'Alberto Fortis ... In Venezia, Presso Gaspare Storti, MDCCLXXI.

4°: [6], 169, [2] p., 3 plates, folding map. Pages 143-144 are blank, but included in the pagination. VERY SCARCE.

REFERENCES: BL: [981.d.10.]. • LKG: XIV 642.

1711. — German, 1779.

Beschreibung des Thales Ronca im veronesischen Gebiet. Aus dem Italiänischen übersetzt von F.A. Weber. Heydelberg: Pfähler, 1779.

8°: viii, 104 p., 4 folding plates.

VERY SCARCE. LKG: XIV 644b. First German edition, translated by Friedrich August Weber.

REFERENCES: BL: [972.g.33.]. • LKG: XIV 644b.

1712. — Italian, 1778.

Della Valle | Vulcanico-Marina | Di Ronca | Nel Territorio Veronese | Memoria Orittografica. | Del Sig. Abate Fortis, | [...2 lines of titles and memberships...] | [vignette] | In Venezia | MDCCLXXVIII. | [double rule] | Nella Stamperia di Carlo Palese.

8°: [I]-LXX p., [1 (blank)] f., 4 fold-out plates.

VERY SCARCE. The title of this work includes the unusual and rare word "orittografica," from the Greek oryctographia, literally "writing about digging," and refers to a combined interest in geology and paleontology. It is, in fact, an essay on the natural history of the volcanic valley of Ronca near Verona, including a discussion of the geology and fossils found in the valley. It is printed with some very fine etchings on fold-out plates. The first plate shows fossil sea-shells, the remainder showing dramatic formations of volcanic rock and the natural scenery around them.

REFERENCES: BL: [457.d.10.]. • LKG: XIV 643a. • Ward & Carozzi, *Geology Emerging*, 1984: no. 849.

1713. — Italian, 1786.

Delle ossa d'Elefanti, e d'altre Curiosità Naturali

FORTIS

de' Monti di Romagnano nel Veronese, Memoria Epistolare Diretta al ... Guiseppe Cobres ... dall' Abate Alberto Fortis ... Vincenza, Nella Stamperia Turra, 1786.

8°: 85 p., 1 folding leaf of plates.

RARE. Letter on fossilized elephant bones found in the region of Verona, Italy. It is addressed to the German naturalist JOSEPH PAUL VON CORBES.

REFERENCES: BL: [953.f.3.(2.)]. • LKG: XVII 95.

1714. — Italy, 1802.

Mémoires pour servir à l'histoire naturelle et principalement à l'oryctographie de l'Italie, et des pays adjacens; par Albert Fortis ... A Paris: Chez J.J. Fuchs, l'an X.

2 vols.

VERY SCARCE. LKG: XIV 518. First edition. Concerns the geology and mineralogy of Italy.

REFERENCES: BL: [726.i.1.]. • LKG: XIV 518. • Ward & Carozzi, *Geology Emerging*, 1984: no. 850.

1715. — Italian, 1774.

Viaggio | In | Dalmazia | Dell' | Abate Alberto Fortis. | [rule] | [...2 lines of quotation, signed Macros...] | [rule] | Volume Primo. | [ornament] | In Venezia. | Presso Alvise Milocco, all' Apolline. | [rule] | MDCCLXXIV.

2 vols. 8°. viii, 180, xlvii, [1]; [2], [iii]-viii, 204 pp. With 2 folding maps and 13 engraved plates (all folding). 4to., 254 x 185 mm

VERY SCARCE. Bound with: Antal Verancsics *Iter Buda Hadrianopolim anno MDLIII exaratum ab Antonio Verantio ... nunc primum e Verantiano carthophylacio in lucem editum* at end of volume one, with separate title page and pagination.

Fortis, an Augustinian friar, physician, naturalist, poet, journalist (and finally librarian of the Bologna library) resided in Croatia from 1771 to 1774; his letters, describing the country and its people, to various luminaries were collected together and published in the present volume. Included are his observations of Cherso and Osero, and the account of the voyage of Antonio Veranzio from Budapest to Constantinople in 1553, edited by Fortis. There are numerous details of the Morlacchi, or Vlassi as they called themselves. In his account Fortis outlined many of the divisions and tensions: the Vlassi despised the people of the coastal towns, who heartily detested them in return. To Fortis the Morlacchi represented a key to the ethnographic identity of Eastern Europe, since they could be identified by their language as Slavs. The accidental discovery of coins, walls and a necropolis at Tupeci made Fortis famous; the naturalist came to the conclusion that the locality could have been the site of the Late Antiquity Laurentum described by Procopius (500? - 565? AD), a Byzantine historian. The engravings depict landscape views, native costumes, archeological ruins, fossils, mineral formations, Fortis's Viaggio in Dalmaziawas translated

into English and French, both editions published in 1778. The above work was quoted by Montague Summers in *The Vampire: His Kith and Kin* (reprinted 1960): "When a man dies suspected of becoming a Vampire or Vulkodlak, as they call it, they cut his hams, and prick his whole body with pins, pretending that, after this operation, he cannot walk about." Another method found to incapacitate the body of an individual destined for vampirism is to break the deceased's spine. Mustard seeds were often placed in the coffin in order to keep the vampire busy counting them" (pp. 204-210). The discrepancy between the number of plates called for on the title-page and the number found in other perfect copies may be accounted for by several plates showing more than one subject.

REFERENCES: Apponyi, *Hungarica Ungarn Bücher*, 1903-27: no. ?? . • BL: [454.a.13.]. • LKG: XIV 841.

1716. — German, 1776.

Reise in Dalmatien. Aus dem Italianischen. Bern, 1776.

2 vols. 13 plates, 3 maps. 8°:

VERY SCARCE. First German edition, translated from *Viaggio in Dalmazia* (1774).

REFERENCES: BL: [1049.b.24.]. • LKG: XIV 841.

1717. — English, 1778.

Travels into Dalmatia; containing general observations on the natural history of that country and the neighboring islands; the natural productions, arts, manners, and customs of the inhabitants; in a series of letters from AbbéAlberto Fortis ... To which are added by the same author. Observations on the island of Cherso and Osero. Translated from the Italian under the author's inspection. With an appendix and other considerable additions, never before printed. Illustrated with twenty copper plates ... London: Printed for J. Robson, 1778.

8°: [2], x, 584 p., 19 plates (partly folding), one map.

VERY SCARCE. First English edition, translated from *Viaggio in Dalmazia* (1774).

REFERENCES: BL: [149.d.3.]. • LKG: XIV 841.

1718. — French, 1778.

Voyage en Dalmatie. Traduit de l'Italien. Berne: Société typ., 1778.

2 vols. 8°. 2 folding maps, plates.

VERY SCARCE. First French edition, translated from *Vaggio in Dalmazia* (1774).

REFERENCES: LKG: XIV 841.

1719. — German, 1797.

Reisebeschreibung von Dalmatien; geographische, historische, naturalistische Denwürdigkeiten auch von den Sitten der Morlaken. Aus dem Italiänischen. Bern: Typographische Scoietät, 1797.

2 vols. 8°:

VERY SCARCE. Second German edition, translated from *Viaggio in Dalmazia* (1774).
REFERENCES: LKG: XIV 841.

1720. — German, 1775.

Die Sitten der Morlacken aus dem Italiänischen übersetzt. Bern: Typographische Gesellschaft, 1775.

8°: [4], 99, [1] p., frontispiece, plates.

VERY SCARCE. First German edition, translated by Friedrich Werthes from *Viaggio in Dalmazia* (1774). Not a complete translation. Caption title: "Von den Sitten der Morlacken."

1721. — German, 1788.

Mineralogische Reise durch Calabrien und Apulien. In Briefen and den Grafen Thomas von Bassegl in Ragusa. Aus dem Italienischen. Weimar: Hoffmannischen Buchhandlung, 1788.

8°: 128 p.

VERY SCARCE. First German edition, translated by Joachim Christoph Friedrich Schulz, novelist.

REFERENCES: BL: [972.e.21.]. • Hoover Collection: no. 319. • LKG: XIV 559. • Roller & Goodman, *Catalogue*, 1976: 1, 410.

1722. — German, 1792.

Reise zu den Morlacken. Lausanne: Bey der Typographischen Gesellschaft, 1792.

8°: [4], 99, [1] p., 3 plates.

VERY SCARCE. Second German edition, translated by Friedrich Werthes from *Viaggio in Dalmazia* (1774). Caption title: "Von den Sitten der Morlacken." First published in 1775 under the title: "Die Sitten der Morlacken."

REFERENCES: BL: [1049.b.26.].

1723. — Italian, 1790.

Mémoria ... al celebre sig. commendatore F. Di-dato Dolomieu ... sopra la miniera di carbone di Sogliano in Romagna. Cesena: Eredi Biasini, 1790.

8°: 31, [1] p.

VERY SCARCE. Concerns coal deposits in Italy.

1724. — Italian, 1793.

Due lettere su i pesci fossili del Monte Bolca. (Lettera del Abate F. al Abate Testa sopra i pesci ischeletriti de Monti di Bolca.-Seconda lettera del Abate Testa su i pesci fossili del Monte Bolca in riposta alla precedente, etc.). Venezia, Presso A. Zatta, 1793.

4°: 96 p.

VERY SCARCE. First edition. Concerns fossil fish found around Bolca, Italy.

REFERENCES: BL: [899.i.2.(7.)].

1725. — German, 1792.

Mineralogische Beschreibungen merkwürdiger Ge-birge und Vulkane Italien. Aus dem Italianische übersetzt von F.A. Weber. Bern, 1792.

2 vols. 8°:

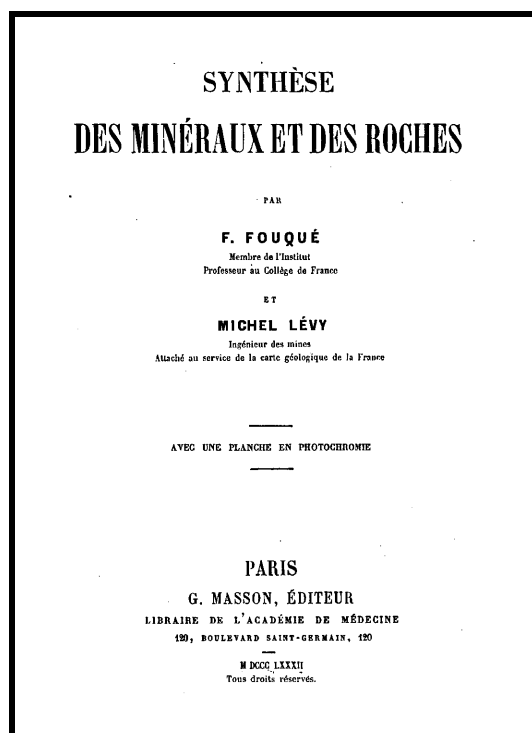
VERY SCARCE. Pini and Strange.

REFERENCES: LKG: XIV 517.

FOUQUÉ, Ferdinand André. (BORN: Mortain, France, 21 June 1828; DIED: Paris, France, 7 March 1904) *French geologist & mineralogist.*

Fouqué made an extended voyage to Italy in 1860, and he also witnessed the eruption of Mt. Etna in 1868. Fouqué was appointed professor of inorganic substances at the College of France in 1877. Elected a member of the French Academy of Science in 1881, Fouqué became its president in 1901. His contributions include the introduction of the microscope for petrographic study to France, pioneering studies in the formation and composition of volcanic products, as well as many volcanic studies and the artificial production of rocks and minerals.

REFERENCES: ABF: I 413, 387-392. • Barr, *Index to Biographical Fragments*, 1973: 89. • *Bulletin de la Société Française de Minéralogie*: 28 (1905), 38-56 [by A. Michel-Lévy]. • DSB: 5, 88-9 [by J.G. Burke]. • *Encyclopaedia Britannica*, 11th edition. • Lacroix, Alfred., *Notice historique sur Auguste Michel-Lévy*. Paris, 1914. • Poggendorff: 3, 464-5 & 4, 443-4 & 5, 382. • Sarjeant, *Geologists*, 1980: 2, 1031-2. • WBI. • *World Who's Who in Science*: 592.



SYNTHÈSE DES MINÉRAUX, 1882

1726. — French, 1882.

Synthèse | Des Minéraux Et Des Roches | Par | F. Fouqué | [...2 lines of titles...] | Et | Michel Lévy | [...2 lines of titles...] | [rule] | Avec Une Planche En Photochromie | [rule] | Paris | G. Masson, Éditeur | Libraire De L'Académie De Médecine

FOYE

| 120, Boulevard Saint-Germain, 120 | [short rule] |
M DCCC LXXXII | Tous droits réservés.

8°: [4], [1]-423, [1] p., one color plate ("Photochromie", showing synthetic rock structures under magnification).

CONTENTS: [2 pgs], Blank, verso "5416.—Paris, Imprimerie A. Lahure."; [2 pgs], Title page, verso blank.; [Colored plate].; [1]-391, Text.; [392], Blank.; [393]-395, "Supplément."; [396], "Errata."; [397]-404, "Collection De Produits Artificiels."; [405]-409, "Table Des Matières."; [410], Blank.; [411]-416, "Table Alphabétique | Des Noms Propres Cités. | Reproductoins Accidenteiles."; [417]-423, "Table Alphabétique | Des Noms Propres Cités. | Reproductoins Artificielles."; [1 pg], Blank.

VERY SCARCE. Co-authored by Auguste Michel-Lévy. First edition of this book on the artifical synthesis of minerals and rocks. A list of references on pages 411-423 gives 135 authors with an indication of their reseaches. The text contains historical references and citations to the bibliography. A catalog of the artificial minerals held in the collection of the Collège de France is given on pages 397-404.

Auguste Michel-Lévy. (BORN: Paris, France, 17 August 1844; DIED: Paris, France, 24 September 1911) *French petrologist & mineralogist.* Michel-Lévy was a brilliant student, and is today called one of the pioneers of microscopic petrology. His interest turned to geology, and in 1862 he matriculated at the Polytechnic School, then entered the School of Mines, from which he graduated at the head of his class in 1867. From 1870 he made his career with the government Geological.

REFERENCES: DSB: 5, 88. • Margerie, *Bibliographies Géologiques*, 1896: no. 390. • *Science*: 1 (1882), 459. (Michel-Lévy) ABF: II 464, 242-244. • Barr, *Index to Biographical Fragments*, 1973: 177. • DSB: 9, 366-7. • Poggendorff: 4, 877-8. • Sarjeant, *Geologists*, 1980: 3, 1713-4. • WBI. • *World Who's Who in Science*: 1173.

1727. — French, 1879.

Minéralogie micrographique, roches éruptives Françaises: planches (=atlas). Paris, Quantin, 1879

[Text] 4°: 509 p., illus. [Atlas] 4°: [2] p., LV plates (some colored). PAGE SIZE: Text: 300 x 230 mm.; Atlas, 350 x 27 mm.

RARE. A fundamental petrographical work with the beautiful chromolithographed illustrations. "Fouqué made 3 important contributions to science. First he added significantly to the knowledge of volcanic phenomena ... secondly in collaboration with AUGUSTE-MICHEL LÉVY he introduced into France the study of rocks by microscopical petrography... The two-volume work *Minéralogie Micrographique* laid the foundation of modern petrography by introducing a classificatory system based on the mineralogical composition, the structure and the chemical composition of volcanic rocks." —DSB.

REFERENCES: *American Journal of Science*: 1881, p. 208. • BL: [no copy listed]. • Carpenter, *Microscope and Its Revelations*, 1883: 2, p. 315. • Dewalque, Gustav., *Catalogue des Ouvrages de Géologie, de Minéralogie et de Paléontologie ainsi que des Cartes Géologiques qui se trouvent dans les principales bibliothèques de Belgique*. Liège, 1884. xii, [2], 394 p: no. 192. • DSB: 5, p. 88. • *Fortschritte der Geologie*: 5 (1880), p. 125-126. • Roller & Goodman, *Catalogue*, 1976: 1, 411.

FOYE, James Clark. (BORN: Great Falls, (now Somersworth), New Hampshire, U.S.A., 1 March 1841; DIED: Chicago, Illinois, U.S.A., 3 July 1896) *American chemist & mineralogist.*

The son of a Methodist Episcopal minister, Foye was appointed instructor of natural sciences at the Cincinnati Female College. In 1867, he was appointed professor of chemistry and physics at Lawrenceville University, Appleton, Wisconsin, where he remained is professional life. He received his Ph.D. in chemistry from De Pauw University, Indiana, in 1882.

REFERENCES: ABA: I 567, 99-101. • *Appleton Cyclopedia of American Biography*. • *Herringshaw's National Library of American Biography*. • WBI.

1728. — English, 1875 [First edition].

Tables for the determination and classification of minerals found in the United States. Chicago, Jansen, McClurg & Co., 1875.

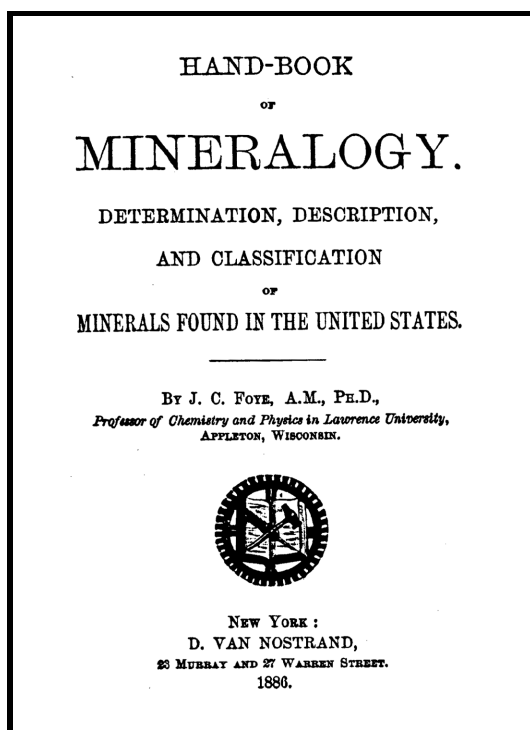
8°: 38 p. RARE.

REFERENCES: NUC.

1729. 2nd edition, 1882: Tables for the determination, description and classification of minerals. By James C. Foye. 2nd revised edition. Chicago, Jansen, McClurg & Co., 1882.

8°: 85 p. VERY SCARCE.

REFERENCES: NUC.



HAND-BOOK OF MINERALOGY, 1886

1730. — English, 1886 [First edition].

Hand-Book | Of | Mineralogy. | Determination, Description | And Classification | Of | Minerals Found In The United States. | [rule] | By J.C. Foye,

A.M., Ph.D., | [...2 lines of titles...] | [ornament] |
New York: | D. Van Nostrand, | 23 Murray and
27 Warren Street. | 1886.

8°: 180 p. Published as: *Van Nostrands Science Series*, no. 86.

RARE. A part of the material of this Work was prepared by the author and published under the title of "Mineral Tables." The second edition of the "Tables" being exhausted, advantage is taken of the opportunity to revise, enlarge rewrite, make additions and corrections, and bring the work out in the present more convenient form.

It has been the intention of the author to furnish a work by the aid of which minerals found in this country may easily be determined, to give concisely their prominent and distinguishing characteristics, and to present the classifications usually used in arranging cabinets. The tables for determining minerals are those constructed by the author and published in the work referred to above. Experience in using them in the classroom for the past eleven years has led to a slight modification of their original form.—*Preface*.

REFERENCES: NUC.

1731. 4th edition, 1892: Hand-book of Mineralogy Determination, Description and Classification of Minerals Found in the United States. New York: D Van Nostrand Company, 1892.

8°: VERY SCARCE.

REFERENCES: NUC.

1732. 1898: Hand-book of Mineralogy Determination, Description and Classification of Minerals Found in the United States. New York: D Van Nostrand Company, 1898.

8°: 123 p. VERY SCARCE.

REFERENCES: NUC.

1733. 5th edition, 1900: Hand-Book | Of | Mineralogy | Determination, Description | And Classification | Of | Minerals Found in the United States | [rule] | By J.C. Foye, A.M., Ph.D. | Alexander W. Stow, Professor of Chemistry in Lawrence University | Fifth Edition-Revised. | Eleventh Thousand. | [ornament] | New York | D. Van Nostrand Company | 23 Murray and 27 Warren Streets | 1900.

8°: [1]-180, [1]-36 p. Printed endpapers with advertisements. PAGE SIZE: 152 x 96 mm. SCARCE.

CONTENTS: [1]-2], Title page, verso "Copyright, 1886, By J.C. Foye."; [3]-4, "Preface."; [5], "Contents."; [6], Blank.; [7]-169, Text.; [170], Blank.; [171]-180, "Index."; [1]-36, Publisher's list.

CHAPTERS: I. Introduction (pp. 7-28). II. Determination of Species (pp. 29-55). III. Description of Species (pp. 56-152). IV. Chemical Classification (pp. 153-163). V. Classification by Basic Elements and Ores (pp. 164-169).

REFERENCES: NUC.

FRANCKE, H. Hugo A.

1734. — German, 1890.

Ueber die | Mineralogische Nomenclatur. | [rule] | Eine ausführliche Erörterung | der für die Bildung | wissenschaftlicher Mineralnamen | in Betracht kommenden | Grundsätze und Regeln. | Von | Dr. H. Hugo A. Francke | Assistant für Mineralogie a.d. Königl. Sächs. Technischen Hochschule | zu Dresden. | [ornate rule] | Berlin. | R. Friedländer & Sohn. | 1890.

8°: π^6 1-78 86; 68 ℓ .; [i]-x, [2], [1]-124 p. PAGE SIZE: 225 x 140 mm.

CONTENTS: [i-ii], Title page, verso quote from E.F. Glocker, 1847.; [iii], Dedication to Ernst Ehrhard Schmid.; [iv], Blank.; [v]-vii, "Vorwort."; [viii], Blank.; [ix]-x, "Inhalts-Uebersicht."; [1 pg], Blank.; [1 pg], "Berichtigung."; [1]-105, Text.; [106]-124, "Anhang. Etymologisch-historisch-kritische Erläuterung einiger Mineralnamen."

VERY SCARCE. An overlooked but important and thorough study of mineralogical names, what they encompass, their history, species and variety names, characteristics of such names, rules governing their choice, etc. This work is an extension of the author's doctorate dissertation, *Die allgemeinen Grundsätze bei der Bildung wissenschaftlicher Mineralnamen* that was presented at the University of Leipzig in 1889.

REFERENCES: BL: [07109.g.17.]. • NUC: 182, 423.



GEMMA MAGICA, 1688

FRANCKENBERG (Frankenberg), Abraham von. (BORN: Ludwigsdorf, Schlesia, Germany, 24 June 1593; DIED: Ludwigsdorf, Schlesia, Germany, 25 June 1652) *German alchemist*.

REFERENCES: Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, col. 789.

1735. — German, 1688.

Gemma Magica | oder | Magisches | Edelgestein / | das ist / | Eine kurtze Erklärung des | Buchs der Natur / nach dess sieben | größten Blättern / auff welchem beydes die Göttliche | und Natürliche Weißheit / durch Gottes Finger |

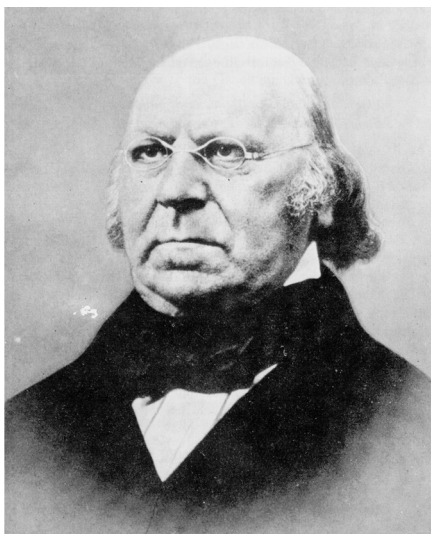
FRANKENHEIM

binein geschrieben / zu lesen ist: | geschrieben
von | Abraham von Franckenberg. | Im Buch
der Weißheit C.I. v.4. | Die Weißheit wird nicht
eingehen in et= | ner böß-artigen Seelen. | J.A.
Th. | Diese Weißheit fällt nicht auff Un-Edle/ |
besondern auff Tugend=Edle Gemü= | ther. | zum
Druck übergeben und befördert | Durch | Einen
Liebhaber des sel. Autoris, | Mit Begnadigung und
Freyheit des | Apollinis und der Musen. | [rule] |
Amsterdam/ | Im Jahr Christi / 1688.

8°: 159, [1] p.

VERY RARE. One of the rarest of alchemical writings, and "of special alchemical interest is the seventh (last) part, entitled, von der lebendigen Zerlegung des Feuers" (Duveen). This works describes among other alchemical subjects the magical virtues of gemstones.

REFERENCES: BL: [1033.c.17]. • BM/STC German: F-891. • Caillet, Manuel, 1912: no. 4185. • Catalogue of the Ferguson Collection of Books: 1, p. 242 [Al-d.9]. • Duveen, Bibliotheca Alchemica et Chemica, 1965: p. 277. • Ferguson, Bibliotheca Chemica, 1906: 1, 289-90. • Kopp, Die Alchemie, 1886: 2, 327. • NUC: 182, 437-8 [NF 0328025].



FRANKENHEIM

FRANKENHEIM, Moritz Ludwig. (BORN: Braunschweig, Germany, 29 June 1801; DIED: Dresden, Germany, 14 January 1869) *German physicist & crystallographer.*

Frankenheim began his teaching career when he was appointed associate professor at the University of Breslau [now Wrocław, Poland??] in 1827. From 1850 to 1866 he was professor of physics and director of the physics cabinet at that same institution. Frankenheim was a pioneer crystallographer who was the first to show in 1826 that spatial lattices were not only geometrically possible but were confined to 32 configurations, thus anticipating Auguste Bravais [q.v.] who is normally credited with the discovery. He also opposed J.N. von Fuch's [q.v.] theory of amorphous with one of aggregates of invisible crystals (important in the theory of colloids).

REFERENCES: Burckhardt, J.J., "Die Entdeckung der 32 Kristallklassen durch M.L. Frankenheim im Jahre 1826," *Neues Jahrbuch für Mineralogie, Monatshefte*, 31 (1984), 481ff. • Burckhardt, *Symmetrie der Kristalle*, 1988: 34-37 & 48-52, portrait. • DBA: I 339, 191-192; II 391, 94-99. • DSB: 5, 124. • Ferchl. • Groth, *Entwicklungsgeschichte*, 1926: 111 & 247. • Jewish Biographical Archive: 250, 262-263 / S40, 243. • NDB: 5, 350 [by K.-F. Seifert]. • Poggendorff: 1, col. 792 & 3, 469-70. • WBI. • World Who's Who in Science: 599.

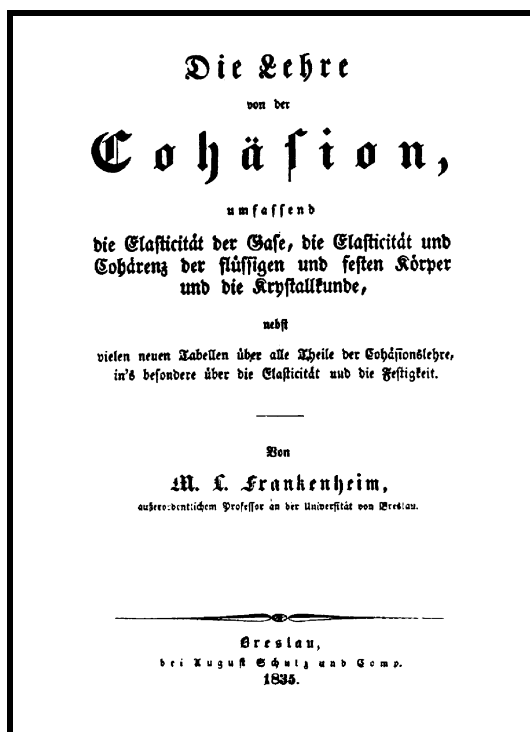
1736. — German, 1829.

De Crystallorum cohæsione dissertationem scripsit et ... defendet M.L. Frankenheim. Socio adsumpto F.W. Hagen. Vratislaviæ, 1829.

4°: 45 p.

VERY RARE. An important study on the hardness of crystals. Frankenheim reports in this dissertation his recognition of a relationship between the symmetry of a crystal and its hardness.

REFERENCES: BMC: 2, 612.



DIE LEHRE VON DER COHÄSION, 1835

1737. — German, 1835.

Die Lehre | von der | Cohäsion, | umfassend
| die Elasticität der Gase, die Elasticität und |
Cohärenz der flüssigen und selten Körper | und
die Krystallkunde, | nebst | vielen neuen Tabellen
über all Theile der Cohäsionslehre, | in's besondere
über die Elasticität und die Festigkeit. | [rule] | Von
| M.L. Frankenheim, | außero:dentlichem Professor

an der Universtität von Breslau. | [ornate rule] |
Breslau, | bei August Schulz und Comp. | 1835.

8°: π^5 1-31⁸ 32⁴; 256 ℓ .; [4], [i]-vi, [1]-502 p., tables.
CONTENTS: [2 pgs], Title page, verso "Gedruckt bei
Leopold Freund."; [1 pg], "Dedication to Stein von
Altenstein."; [1 pg], Blank.; [i]-iv, "Vorrede."; v-vi,
"Inhaltsanzeige."; [1]-502, Text.

VERY SCARCE. A pioneering study in material
science. This work concerns the cohaesion of substances
and therefore includes a great deal of information on
the hardness of minerals as it relates to the crystal
structure. Also contained throughout the text are
bibliographical references. "Frankenheim's importance
lies especially in the field of crystallography. In his
work *Die Lehre von der Cohäsion* he was the first to
examine whether or not the geometrically possible types
of cristal lattices agree in their symmetry relations with
those actually observed in crystals" (DSB).

REFERENCES: BL: [538.b.18.]. • BMC: 2, 612. •
Lima-de-Faria, *Historical Atlas of Crystallography*, 1990:
[reproduces the title page]. • NUC: 183, 19 [NF 0336563].
• Roller & Goodman, *Catalogue*, 1976: 1, 417.

1738. — German, 1842.

System Der Krystalle. | Ein Versuch | Von | M.L.
Frankenheim, | M.d.A.d.N. | Professor An Der
Universtität Von Breslau. | [double rule] | Besonderer
Abdruck as der 2ten Abtheilund des 19ten Bandes
der Nova Acta Acad. Nat. Cur. | [double rule] |
Breslau | Druck Von Grass, Barth Und Comp. |
[rule] | 1842.

4°: [1]-191, [1] p. PAGE SIZE: 285 x 214 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-191,
Text.; [1 pg], "Zusätze und Verbesserungen."

VERY SCARCE. The introduction covers various
details about the physical properties of minerals, such
as specific gravity, hardness and crystallography. This
work is based partly on Mohs *Handbuch der Mineralogie*
(??, 18??). After the introduction, the characteristics of
crystals are discussed followed by a detailed discussion
of the six crystal systems, I. Tessular, II. Tetragonale,
III. Hexagonale, IV. Isoclinic, V. Monoclinic and VI.
Triclinic. The impact of isomorphism and diamorphism
to crystal structure in minerals is then described. A
section giving the chemical formulas of the minerals
mentioned and a comprehensive index to the names of
minerals mentioned closes the work.

REFERENCES: BL: [7105.ee.32.]. • NUC: 183, 19
[NF 0336566].

1739. — German, 1851.

Krystallisation und Amorphie. Breslau, L. Freud,
1851.

8°: [2], 42 p. VERY SCARCE.

REFERENCES: BMC: 2, 612. • NUC: 183, 19
[NF 0336562].

1740. — German, 1869.

Zur Krystallkunde ... Band I. Charakteristik der
Krystalle. Leipzig, J.A. Barth, 1869.

8°: vi, 214 p., tables.

VERY SCARCE. No more published.

REFERENCES: BL: [7106.bb.43]. • BMC: 2, 612. • NUC:
183, 19 [NF 0336569].

FRATTA ET MONTALBANO, Marco Antonio Della. (BORN: 1635; DIED: 1695) *Italian aristocrat.*

MONTALBANI (the marquis Marc-Marc-Antoine),
wire of the precedent, had been born in 1630. It was pursued
the study of mineralogy particularly, and traversed as a
naturalist the countries of the north of Europe. The king
of Poland Jean-Casimir accomodated it with kindness at
his court, and decorated it with the title of marquis. Marc
returned to Italy, rich person of much of new knowledge; and
after having exploited the coasts of the Adriatic, it returned
to Bologna to lay out its materials and to put in order the
collections which it had formed. It died there in 1695, at
the 65 years age. There is of him 1 *Catascopia minerale*,
overo esplanazione E modo di far saggio of ogni will minira
metallica, Bologna, 167 6, in-4; 20 *Pratica minerale*, ibid.,
1678, in-4; 30 *acque Belazione dell' minerale LED regno of*
Ungaria, Venice, 1687, in-4. Orlandi still allots to him: *Di*
Ferdinando quoted.

MONTALBANI (le marquis Marc-Antoine), fils du
précédent, était né en 1630. Il s'attacha particulièrement
à l'étude de la minéralogie, et parcourut en naturaliste
les pays du nord de l'Europe. Le roi de Pologne Jean-
Casimir l'accueillit avec bonté à sa cour, et le décora du
titre de marquis. Marc rentra en Italie, riche de beaucoup
de connaissances nouvelles; et après avoir exploité les côtes
de l'Adriatique, il revint à Bologne disposer ses matériaux
et mettre en ordre les collections qu'il avait formées. Il y
mourut en 1695, à l'âge de 65 ans. On a de lui 1 *Catascopia*
minerale, overo esplanazione e modo di far saggio d'ogni
minira metallica, Bologne, 167 6, in-4; 20 Pratica minerale,
ibid., 1678, in-4; 30 Belazione dell' acque minerale del regno
d'Ungaria, Venise, 1687, in-4. Orlandi lui attribue encore :
La cita di Ferdinando.

REFERENCES: *Biographie Universelle*: 29, 25. • *Dizionario*
Biografico Italiani. • Paoli, U.G., "Il Marchese Marco
Antonio de la Fratta e Montalbano (1635-1695)," *Archeion*,
17 (1935), 353-78.

1741. — Italian, 1676.

Catascopia | Minerale | Ouero | Modo Di Far
Saggio | D'Ogni Miniera Metalica | Trattato | Del
Signor Marchese | Marco Della Fratta Montalbano
| Nobile Bolognese. | Dedicato all' Eccel.^{za} Ill.^{ma}
del Sig. Caualiere | Alvise Sagredo | Fratello del
Serenissimo Doge | di Venetia. | [ornament] | In
Bologna, Per li Manolesi. M. DC. LXXVI. | [rule]
| Con licenza de' Superiori.

4°: π^4 A-E4; 24 ℓ .; [8], 1-39, [1] p., one full-
page engraving (p. 5, 4 panels showing furnace, scales,
bellows, and a metal smith). PAGE SIZE: 214 x 152
mm.

CONTENTS: [2 pgs], Half title page, "Catascopia |
Minerale," verso blank.; [2 pgs], Title page, verso blank.;
[3 pgs], "Eccellentiss Signore."—signed Marco della Fratta
Montalbano.; [1 pg], "Lettore."; 1-39, Text, starting
"Prefatione."; [1 pg], Blank.

VERY RARE. This book was later re-issued in 1678
as the second part of the author's *Pratica Minerale*
which is considered to be "one of the most important
of the early books on mining." (Adams).

The text consists of 13 chapters: (1) On the
furnace. (2) De Copelle. (3) Dell' Ordine da tenersi
nell'Operare. (4) Della Divisione dell' Ordine de' Saggi.
(5) Del modo del fuoco. (6) Della Vena dell' Oro



CATASCOPIA MINERALE, 1676



PRATICA MINERALE, 1678

Domesica. (7) Della Vena difficile à fondersi. (8) Della Vena dell' Oro-annessa ad altre. (9) Modo di far Saggio della Vena d'Oro con l'Argento Vино. (10) Della Vena dell' Argento domestica. (11) Della Vena d'Argento difficile à fondersi. (12) Della Vena del Rame. (13) Della Vena del Piombo Vero.

Facsimile reprint, 1985: A modern edition with an introduction was published in 1985 as: *Pratica Minerale ... Marco Antonio Della Fratta et Montalbano, a cura di Marco Cima*. Firenze, All'insegna del giglio, [1985] (xliii, 2, 183, [6] p.).

REFERENCES: BL: [B.385.(1.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 42. • Jonathan Hill, Bookseller: cat. 131 (2000), no. 36. • NUC: [no copy listed]. • Roller & Goodman, *Catalogue*, 1976: 1, 420.

1742. — Italian, 1678.

Pratica | Minerale | Trattato | Del March. Marco Antonio Della Fratta | Et Montalbano. | All' Altezza Serenissima | Di Ranvccio Farnese | Duca di Parma, di Piacenza, &c. | [woodcut vignette featuring a coat-of-arms] | [rule] | In Bologna, Per li Manolesi. 1678. Con licenza de Superiori.

[ENGRAVED TITLE PAGE:]

[Within an elaborate woodcut border showing 14 vignettes of activities related to mining and metallurgy:] Pratica | Minerale | Trattato | Del | March. Marco Ant.^o | Della Fratta | Et Montalbano | All'Altezza Sereniss.^a | Di | Ranvccio. II. | Dvca Di Parma | Di Piacenza &c.

4°: \pm^6 A-Z⁴ 2A-2E⁴; 117ℓ.; [10], 183, [1] p.; [1], 39 p., illus., 28 full page plates. Added engraved title page, title vignette, ornamental initials. PAGE SIZE: 220 x 160 mm.

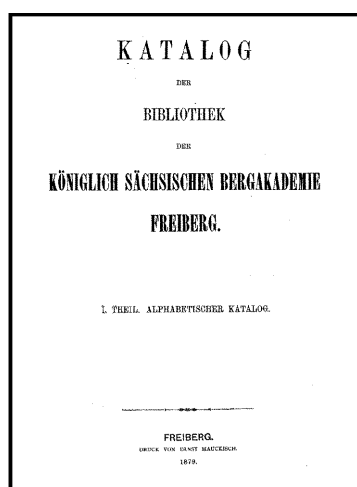
RARE. A handsomely illustrated textbook on mining and metallurgical operations, which contains much practical information. Adams describes it has "one of the most important of the early books on mining." It is particularly strong in describing the construction and operation of smelting furnaces. Also included are observations about various minerals and metals. The author supports Agricola's views in that metals and ores did not spring spontaneously into being at the moment the world was created. The unsigned plates picture a wide variety of furnaces and related technologies.

Facsimile reprint, 1985: A modern edition with an introduction was published in 1985 as: *Pratica Minerale ... Marco Antonio Della Fratta et Montalbano, a cura di Marco Cima*. Firenze, All'insegna del giglio, [1985] (xliii, 2, 183, [6] p.).

REFERENCES: Adams, *Birth and Development*, 1938: p. 306. • BL: [444.c.3.(3.)]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 229 ["The plates are of very unusual quality."]. • Freilich Sale Catalog: no. 193. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 41. • Hoover Collection: no. 322. • NUC: 183, 470-1 [NF 0348470]. • Roller & Goodman, *Catalogue*, 1976: 1, 420. • Singer, *History of Technology*, 1957-9: 3, 50.

FREIBERG BERGAKADEMIE.

1743. — German, 1879.



KATALOG DER BIBLIOTHEK, 1879

Katalog | Der | Bibliothek | Der | Königlich
Sächsischen Bergakademie | Freiberg. | I. Theil.
Alphabetischer Katalog. | [ornate rule] | Freiberg. |
Druck Von Ernst Mauckisch. | 1879.

8°: [6], [1]-766, [3] p. PAGE SIZE: 260 x 168 mm.
uncut.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs],
"Vorwort.;" [2 pgs], "Erläuternde Bemerkungen."—signed
C.G. Kreischer, June, 1879.; [1]-740, Text.; [741]-765,
"Nachtrag.;" [1 pg], "Berichtigungen.;" [1 pg], Blank.;
[1 pg], "Druck von E. Mauckisch in Freiberg."

RARE. First printed catalogue of the library of
the famous Bergakademie in Freiberg, Germany. This
volume lists 17,836 books by author, with title, place
and date of publication. Although three supplements
were published, the projected subject classification that
would be a companion to this original volume was never
published.

This Bergakademie's library is one of the greatest
mineralogical and geological collections yet assembled.
Founded in 1766 with the Bergakademie it had 1875
volumes by 1819 when it was fortunate to acquire the
3306 works that composed the personal library of its
most famous teacher, Abraham Gottlob Werner. The
library continued to be enlarged through donations and
purchases and still exists in Freiberg, Germany. Three
supplements were published between 1893 and 1928.
These are listed below.

Supplement I, 1893: Nachtrag I | zum | Alphabetischen
| Katalog | Der Bibliothek | Der | Königlich Sächsischen
Bergakademie | Freiberg. | [short rule] | Zuwachs Von
Ende Des Jahrs 1879 Bis Ende 1892. | [ornate rule]
| Freiberg. | | Buchdruckerei und Verlagsanstalt Ernst
Mauckisch. | 1893. 8°: [2], [1]-159, [1] p.

Supplement II, 1907: Nachtrag II | zum |
Alphabetischen | Katalog | Der Bibliothek | Der |
Königlich Sächsischen Bergakademie | Freiberg. | [short
rule] | Zuwachs Von Ende Des Jahrs 1892 Bis Ende 1905.
| [ornate rule] | Freiberg i. Sa. | In Kommission bei Craz
& Gerlach (Joh. Stettner). | 1907. 8°: [2], [1]-144 p.

Supplement III, 1928: Nachtrag III | zum |
Alphabetischen | Katalog | Der Bibliothek | Der Bücherei
| Der | Bergakademie Freiberg. | [short rule] | Zuwachs

Von Anfang 1906 Bis Ende 1927. | Druck Von Ernst
Mauckisch | Freiberg I. Sa. 1928. 8°: [4], [1]-226 p.

REFERENCES: Margerie, *Bibliographies Géologiques*,
1896: no. 511.



FREIESLEBEN

FREIESLEBEN, Johann Carl. (BORN: Freiberg,
Germany, 14 June 1774; DIED: Nieder-Auerbach,
Voigtland??, 20 March 1846) *German mineralogist &
geologist.*

Freiesleben studied under A.G. WERNER at the
Bergakademie in Freiberg. In 1799, he was awarded the
title of Bergmeister, and in 1800 he was appointed advisor
to the mining council and director of mining activities in
Eisleben. In 1838 he became Chief Mining Advisor for all
of Saxony, a post he held until his retirement in 1842.

REFERENCES: ADB: 7, 339-40. • DBA: I 342, 87-99; II
394, 361-362. • DSB: 5, 155-6 [by H. Tobien]. • Lambrecht
& Quenstedt, *Catalogus*, 1938: 148. • Meusel, *Verstorbenen
Teutschen Schriftsteller*, 1802-16. • NDB: 5, 395-6 [by H.
Freydank]. • Poggendorff: 1, col. 796. • Sarjeant, *Geologists*,
1980: 2, 1040 & Suppl. 1 (1986), 1, 426. • WBI.

1744. — German, 1794.

Mineralogische Bemerkungen über das Schillernde
Fossil, von der Baste bey Harzburg insbesondere
mit Hinsicht auf dessen geognostisches Vorkom-
men. Im Nahmen der Linneischen Societät zu
Leipzig ... Leipzig, zu finden bey Wagner und Co.,
1794.

8°: A-B⁸ C³; 22ℓ.; [2], 38, [4] p.

RARE. Freiesleben, a member of an old Freiberg
mining family, was one of the most gifted and most
learned students of Werner and a close friend of von
Buch and Humboldt. The author later became chief
administrator of the mines in the Kingdom of Saxony.

"Through his exact and reliable descriptions of the
Permian and Triassic sedimentary formations in Saxony
and Thuringia he pushed beyond Werner to a greater
knowledge of the stratigraphic relationships of these
periods in central Germany and helped to create the
basis for stratigraphic comparisons with neighboring
regions. His painstaking and accurate data on mining

FREIESLEBEN

in Saxony and on the occurrence of minerals there are still valuable for historical purposes." (DSB)

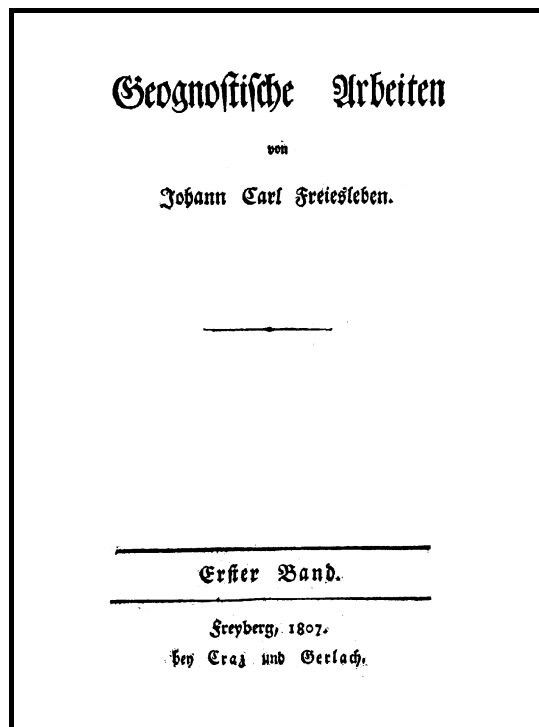
REFERENCES: BL: [B.386.(4.)]. • DSB: 5, 156. • LKG: XVI 403. • NUC: [no copy listed].

1745. — German, 1795.

Der Bemerkungen über den Harz. Leipzig, Schäferischen Buchhandlung, 1795.

2 vols. RARE.

REFERENCES: BL: [970.e.12-13.]. • LKG: XIV 175.



GEOGNOSTISCHE ARBEITEN, 1807

1746. — German, 1807-15.

[Series title page reads:] Geognostische Arbeiten | von | Johann Carl Freiesleben. | [ornate rule] | [rule] | Erster [-Sechster] Band. | [rule] | Freyberg, 1807 [-1817]. | bey Craz und Gerlach.

[VOLUME ONE TITLE:]

Geognostischer Beytrag | zur Kenntniss | des | Kupferschiefergebirges | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Manns= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...2 lines of titles and memberships...] | [rule] | Erster Theil. | [rule] | Freyberg, 1807. | bey Craz und Gerlach.

[VOLUME TWO TITLE:]

Geognostische Arbeiten | von | Johann Carl Freiesleben. | [tapered rule] | Mit einem Kupfer. | [rule] | Zweyter Band. | [rule] | Freyberg, 1809. |

by Craz und Gerlach.

[VOLUME THREE TITLE:]

Geognostischer Beytrag | zur Kenntniss | des | Kupferschiefergebirges, | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Mans= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...2 lines of titles and memberships...] | Mit 1 Kupfer und 1 illuminirten petrographischen | Chartre. | [tapered rule] | Dritter Theil. | [tapered rule] | Freyberg 1815. | bey Craz und Gerlach.

[VOLUME FOUR TITLE:]

Geognostischer Beytrag | zur Kenntniss | des | Kupferschiefergebirges, | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Mans= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | Mit 2 Kupfern. | [tapered rule] | Vierter Theil. | [tapered rule] | Freyberg 1815. | bey Craz und Gerlach.

[VOLUME FIVE TITLE:]

Beyträge | zur | Mineralogischen Kenntniss | von Sachsen, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | [tapered rule] | Erste Lieferung. | [tapered rule] | Freyberg, 1817. | bey Craz und Gerlach.

[VOLUME SIX TITLE:]

Beyträge | zur | Mineralogischen Kenntniss | von Sachsen, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | [tapered rule] | Zweyte Lieferung. | [tapered rule] | Freyberg, 1817. | bey Craz und Gerlach.

6 vols. [VOL 1: 1807] 8°: *⁸ A-T⁸ U⁴; 164^{l.}; [i]-xvi, [1]-312 p. [VOL 2: 1809] 8°: π⁵ A-P⁸ Q³; 128^{l.}; [i]-x, [1]-242, [4] p., one folding map. [VOL 3: 1815] 8°: π⁴ *⁸ A-X⁸; 181^{l.}; [i]-xxiv, [1]-338 p., one folding map (colored). [VOL 4: 1815] 8°: π⁶ A-Ff⁸ Gg²; 236^{l.}; [i]-xii, [1]-459, [1] p., 2 folding plates (cross-sections). [VOL 5: 1817] 8°: π⁸ A-Q⁸ R⁴; 140^{l.}; [i]-xv, [1], [1]-264 p. [VOL 6: 1817] 8°: π⁸ A-T⁸ U⁴; 164^{l.}; [i]-xvi, [1]-312 p. PAGE SIZE: 226 x 120 mm. uncut.

CONTENTS: [Vol 1] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Geognostischer Beytrag | zur Kenntniss | des | Kupferschiefergebirges | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Manns= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...2 lines of titles and memberships...] | [rule] | Erster Theil. | [rule] | Freyberg, 1807. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-xiv, "Vorrede."—signed J.C. Freiesleben, 15 March 1807.; [1]-202, Text.

[Vol 2] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Geognostischer Beytrag | zur Kenntniss | des | Kupferschiefergebirges | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Manns= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...2 lines of titles and memberships...] | Mit einem Kupfer. | [rule] | Zweyter Theil. | [rule] | Freyberg, 1809. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-x, "Vorrede."—signed J.C. Freiesleben, 17 September 1808.; [1]-242, Text.; [2] pgs], "Erklärung | der beygehenden Zeichnung."; [2] pgs], Publisher's list.

[Vol 3] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Geognostischer Beytrag | zur Kenntniß | des | Kupferschiefergebirges | mit besonderer Hinsicht | auf | einen Theil der Grafschaft Manns= | feld und Thüringens, | von | Johann Carl Freiesleben, | [...2 lines of titles and memberships...] | Mit 1 Kupfer und 1 illuminierten petrographischen | Charte. | [tapered rule] | Dritter Theil. | [tapered rule] | Freyberg, 1815. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-viii, "Vorrede."—signed J.C. Freiesleben, 13 March 1815.; [ix]-xxiv, "Uebersicht des Inhalts | in den bisherigen drey Bänden."; [1]-338, Text.; [At end], Folding map.

[Vol 4] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Geognostischer Beytrag | zur Kenntniß | des | Kupferschiefergebirges, | auch einiger | benachbarter Gebirgsformationen, | mit besonderer Hinsicht | auf | Thüringen, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | Mit 2 Kupfern. | [tapered rule] | Vierter Theil. | [tapered rule] | Freyberg, 1815. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-viii, "Vorrede."; ix-xii, "Uebersicht des Inhalts | vom vierten Bande."; [1]-392, Text.; [393]-459, "Register."; [1 pg], "Druckfehler."

[Vol 5] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Beyträge | zur | Mineralogischen Kenntniß | von Sachsen, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | [tapered rule] | Erste Lieferung. | [tapered rule] | Freyberg, 1817. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-viii, "Vorbericht."—signed J.C. Freiesleben, 14 March 1817.; [ix]-xv, "Uebersicht des Inhalts."; [1 pg], "Druckfehler und Verbesserungen."; [1]-264, Text.

[Vol 6] [i-ii], Blank, verso series title page.; [iii-iv], Sectional title page, "Beyträge | zur | Mineralogischen Kenntniß | von Sachsen, | von | Johann Carl Freiesleben, | [...3 lines of titles and memberships...] | [tapered rule] | Zweyte Lieferung. | [tapered rule] | Freyberg, 1817. | bey Craz und Gerlach," verso blank.; [v], Dedication.; [vi], Blank.; [vii]-viii, "Vorbericht."—signed J.C. Freiesleben, 10 September 1817.; [ix]-xvi, "Uebersicht des Inhalts."; [1]-302, Text.; [303], "Beylagen."; [304], Blank.; 305-312, Text of Beylagen.

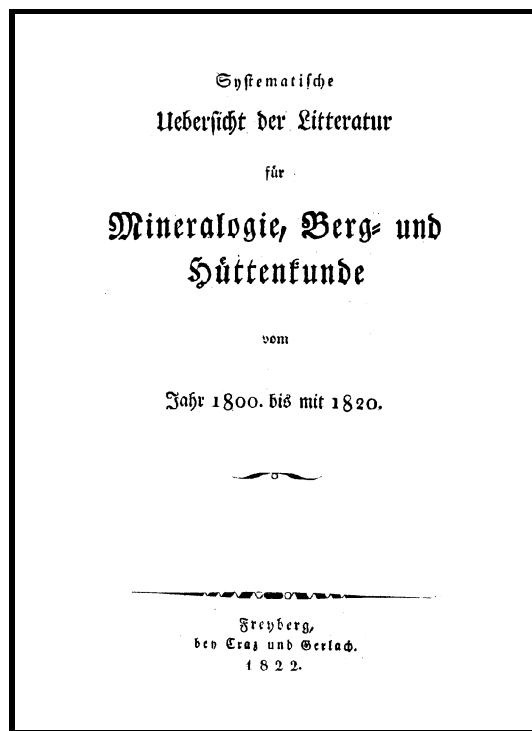
RARE, especially in complete sets. Each volume has its own special title page, as follows: Volumes 1–4. "Geognostischer Beyträge zur Kenntniß des Kupferschiefergebirges mit besonderer Hinsicht auf einen Theil der Grafschaft Mannsfeld und Thüringens." Volumes 5–6. "Beyträge zur mineralogischen Kenntniß von Sachsen."

The first volumes provide a geological description of the great copper deposits (known as the Kupferschiefergebirges) in Germany. Details are given of the locations, formations, ore types, history, etc. of the region. The last two volumes of this series, *Beyträge zur mineralogischen Kenntniß von Sachsen*, describe the mineralogy of the region of Saxony in Germany. Freiesleben first describes the geological lay of the land, and the type of rocks found throughout. He then describes iron and tin mining, and the various mineral species found. Basalt is then described. The work concludes with Freiesleben's descriptive mineralogy of all species known to occur in the Saxon regions.

REFERENCES: Dana's 7th (Bibliography): 71. • LKG: XIV 242. • Roller & Goodman, *Catalogue*, 1976: 1, 421. • Ward & Carozzi, *Geology Emerging*, 1984: no. 865.

1747. — German, 1822 [Separate edition].

Systematische | Uebersicht der Litteratur | für



SYSTEMATISCHE UEBERSICHT , 1822

| Mineralogie, Berg= und | Hüttenkunde vom | Jahr 1800. bis mit 1820. | [ornament] | [ornate rule] | Freyberg, | bey Craz und Gerlach. | 1822.

8°: a⁸ b³ A-X⁸ Y⁴ Z² Aa¹; 186ℓ.; [i]-xxi, [1], [1]-350 p.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-x, "Vorbemerkung."—signed Johann Carl Freiesleben, 4 June 1822.; xi-xxi, "Inhalt."; [1 pg], "Druckfehler."; [1]-329, Text.; 330-348, "Namenregister der Schriftsteller."; 349-350, Publisher's list of books for sale.

VERY SCARCE. The first appearance of this bibliography was in the *Bermännischen Journal* for 1816. This is a separate, expanded edition, bringing the bibliographic coverage up to 1820. It is a classified catalog biased to German literature with the first part covering writings in mineralogy, mining and metallurgy. Under this heading are listed bibliographies, dictionaries, works on nomenclature, periodicals, specialized writings in mineralogical chemistry and metallurgy, mineral analysis, mineral economics, and topographical works. The second portion covers textbooks of mineralogy, oryctognosy, classificatory works, petrology, and geognosy. The third section lists works on mining and mine procedures.

REFERENCES: BL: [725.b.39.]. • Dana's 7th (Bibliography): 71. • NUC: 184, 406-7 [NF 0365498]. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 567.

1748. — German, 1817.

Beyträge | zur | Mineralogischen Kenntniß | von Sachsen, | von | Johann Carl Freiesleben,

FRENZEL

[...3 lines of titles and memberships...] | [tapered rule] | Erste [-Zweyter] Lieferung. | [tapered rule] | Freyberg, 1817. | bey Craz und Gerlach.

VERY SCARCE. Published as volumes 5 and 6 of the author's *Geognostische Arbeiten*, which is where this work is described. See the entry above for a complete description of this work.

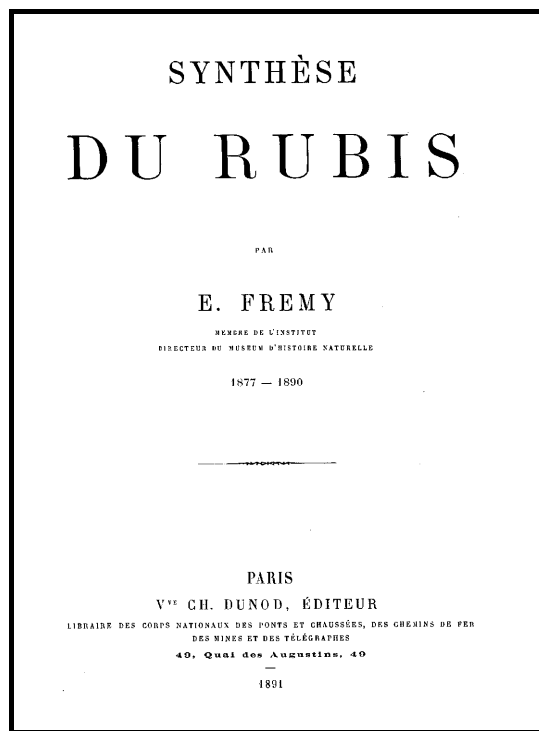
Magazin für Orytographie von Sachsen. Ein Beytrag zur mineralogischen Kenntniß dieses Landes und zur Geschichte seiner Mineralien. In freyen Heften, herausgegeben von Johann Carl Freiesleben. (Freyberg, 1828-48).

See: *Magazin Für Orytographie*.

FREMY, Edmond. (BORN: Versailles, France, 28 February 1814; DIED: Paris, France, 3 February 1894) *French chemist*.

Fremy studied under Gay-Lussac, and became professor of chemistry at the École Polytechnique. Later, at the Muséum d'Histoire Naturelle in Paris. Fremy edited 40 volumes of the *Encyclopédie Chimique* (Paris, 1882-94). In 1857 he was elected to the French Academy of Science.

REFERENCES: ABF: I 421, 311-321; II 275, 115. • *Biographie Universelle*. • DSB: 5, 157-8. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 797-8, 3, 473 & 4, 453. • WBI.



SYNTHÈSE DU RUBIS, 1891

1749. — French, 1891.

Synthèse | Du Rubis | Par | E. Fremy | Membre De L'Institut | Directeur Du Museum D'Histoire Naturelle | 1877—1890 | [ornate rule] | Paris | Vve Ch. Dunod, Éditeur | Libraire Des Corps

Nationaux Des Ponts Et Chaussées, Des Chemins De Fer | Des Mines Et Des Télégraphes | 49, Quai des Augustins, 49 | [short rule] | 1891.

4°: [2], 30, [2] p., *ℓ.*34-55 (plates), [57]-58, [2] p. The strange pagination results from numbering the plates on the recto side only. PAGE SIZE: 370 x 235 mm. uncut.

VERY SCARCE. Frémy was celebrated as the first to synthesis ruby. He had started the research in 1877 and brought the experiments to a successful conclusion in 1890. In this work he reports on the process, equipment, and materials used, and describes the technical problems encountered in the synthesis. The numerous plates show the crystals in various stages of growth, the equipment, and jewelry made from stones faceted from the material.

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 2239.

FRENZEL, David. (BORN: 1691; DIED: Chemnitz, Saxony, Germany?, 1772) *German precious stone inspector*.

Frenzel was appointed the assistant precious stone inspector in 1743 in Chemnitz, rising to full inspector in 1764.

REFERENCES: Urban, Gerald., "David Frenzels kurzer Bericht über die versteinerten Hölzer in Chemnitz (1750), die erste Erwähnung des versteinerten Waldes von Karl-Marx-Stadt", *Zeitschrift für geologischen Wissenschaften*, 8 (1980), no. 2, 151-8, 2 illus.

1750. — German, 1768.

Die Natur und Wirkung des Mineralischen Wassers zu Lauchstädt ... Halle, Verlag des Walsenhauses, 1768.

8°: 212, [11] p.

VERY SCARCE. First edition. Concerns the mineral waters of Lauchstadt as medicinal items.

REFERENCES: LKG: XIV 219.

1751. — German, 1769.

David Frenzels, | [...2 lines of titles and memberships...] | Verzeichniß | der | Edelgesteine, Fossilien, | Naturalien, Erdarten | und | Versteinerungen, | welche im Bezirk | der Stadt Chemnitz | in Miesen, | gefunden und bemerkt worden. | [ornate rule] | Chemnitz, | Bey Joh. Dav. Stöffels Erben und Putscher. | 1769.

8°: [1]-32 p.

VERY RARE. This title is listed as the work of David Frenzel by BLC.

Urban (1980) says David Frenzel with Biography!!!
FIX THIS ENTRY.....

REFERENCES: Adams Library. • BL: [B.405.(2.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 76. • *Jenaische gelehrte Zeitungen*: 1769, p. 395. • LKG: XIV 219. • NUC: 184, 667 [NF 0372402]. • Roller & Goodman, *Catalogue*, 1976: 1, 422. • Sinkankas, *Gemology Bibliography*, 1993: [no copy listed]. • Urban, Gerald., "David Frenzels kurzer Bericht über die versteinerten Hölzer in Chemnitz (1750), die erste Erwähnung des versteinerten Waldes von Karl-Marx-Stadt", *Zeitschrift für geologischen Wissenschaften*, 8 (1980), no. 2, 151-8, 2 illus.



FRENZEL

FRENZEL, Friedrich August. (BORN: Freiberg, Germany, 24 May 1842; DIED: Freiberg, Germany, 27 August 1902) *German mineralogist.*

Frenzel won a scholarship to the Freiberg Bergakademie. Early on, he attracted the attention of A. BREITHAUPT, who asked him to help arrange the museum collections and determine their species. Under his mentor's direction, Frenzel soon was an expert mineralogist. However, his father died, and he had to contribute to his mother's support. He worked as a miner while completing his course work at Freiberg. After graduation, he accepted a position in the smelting laboratory of the town. He applied himself to the position, and he may have been the first researcher to isolate the element "Germanium," to which priority is given to G.G. WINKLER of Freiberg.

REFERENCES: *American Geologist*: **30** (1903), no. 5, 333-5 [by P. Frazer]. • DSB: **5**, 161-2 [by V.V. Tikhomirov & T.A. Sofiano]. • Sarjeant, *Geologists*, 1980: **2**, 1043. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: **1**, 169, portrait. • *Zentralblatt für Mineralogie*: Jg. 1902, 641-6 [by R. Beck].

1752. — German, 1874.

Mineralogisches Lexicon | für das | Königreich Sachsen. | Von | August Frenzel. | [rule] | Leipzig, | Verlag von Wilh. Engelmann. | 1874.

8°: π^4 1-23⁸ 246; 194 ℓ .; [2], [i]-vi, [1]-380 p. PAGE SIZE: 166 x 104 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [i]-iv, "Vorwort"—signed August Frenzel, 2 September 1873.; [v]-vi, "Benutzte Werke."; [1]-352, Text.; [353]-358, "Nachtrag."; [359]-371, "Orts-Register."; [372]-380, "Sach-Register."

VERY SCARCE. *Mineralogisches Lexicon für das Königreich Sachsen* contains descriptions of 723 mineral species found in the region of Saxony in Germany. It gives information of their physical properties and chemical composition as well as the regional localities. This handbook became very popular among mineralogists and brought widespread attention to the author. The introduction gives a list of useful references in mineralogy and the work concludes with locality and subject indexes.

REFERENCES: BL: [7106.aa.1.]. • Dana's 7th (Bibliography): **71**. • DSB. • Spencer, *Catalogue of Topographical*

Mineralogisches Lexicon

für das

Königreich Sachsen.

Von

August Frenzel.

Leipzig,

Verlag von Wilh. Engelmann.

1874.

MINERALOGISCHES LEXICON, 1874

Mineralogies, 1948: [p. 308].

FRIDVALDSZKY, Johann. (BORN: Altsohl, Hungary, 13 December 1740; DIED: 1784) *Hungarian Jesuit & mathematician.*

Jesuit, instructor of mathematics at the Collegium in Clauseburg, then after the abolishment of the order, he made many mineralogical excursions through regions of Hungary.

REFERENCES: Csíky, *Forerunners of Mining-Geology Mapping*, 1984. • Lambrecht & Quenstedt, *Catalogus*, 1938: **149**. • Poggendorff: **1**, cols. 804 & 1566. • Sarjeant, *Geologists*, 1980: **2**, 1044.

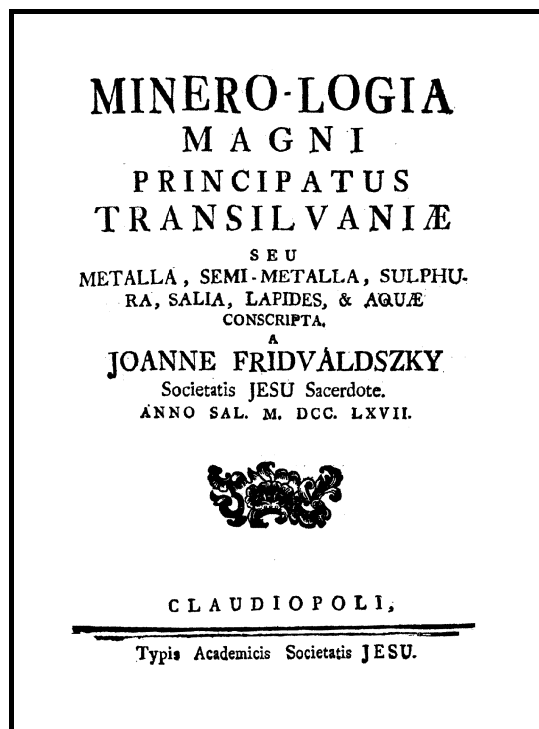
1753. — Latin, 1767.

Minero-logia | Magni | Principatus | Transilvaniae | seu | Metalla, Semi-Metalla, Sulphu- | ra, Salia, Lapides, & Aquae | Conscripta. | A | Joanne Fridvaldsky | Societatis Jesu Sacerdote. | Anno Sal. M. DCC. LXVII. | [ornament] | Claudiopoli, | [double rule] | Typis Academicis Societatis Jesu.

8°:)⁽⁴ §⁴ A-N⁸ O²; 109 ℓ .; [16], [1]-206, [6] p., 4 plates (one folding). PAGE SIZE: 210 x 165 mm.

CONTENTS: [1 pg], Title page.; [1 pg], Dedication to Antonio Cothmann.; [1 pg], "Assertiones | Theologicae."; [1 pg], "Sub | Gratosissimis Auspiciis | Illustrissimi."; [6 pgs], "Assertiones | De | Virtutibus Theologicis."; [5 pgs], "Illustrissime Domine | Baro."—signed Joannes Fridvaldsky.; [1 pg], "Ad Lectorem."; [1]-206, Text.

RARE. An early topographical work describing the minerals, metals and mines of Transylvania. After providing a general discussion of the work's goals, Fridvaldsky describes the metals, semi-metals, sulphurs,



MINERO-LOGIA, 1767

salts, earths & stones, and waters in individual sections of the text. Included are notes about the locations of occurrences.

REFERENCES: BL: [1255.c.2.]. • LKG: XIV 839. • NUC: [no copy listed]. • Roller & Goodman, *Catalogue*, 1976: 1, 424. • Ward & Carozzi, *Geology Emerging*, 1984: no. 868.



FRIEDEL

FRIEDEL, Charles. (BORN: Strausbourg, France, 12 March 1832; DIED: Montauban, France, 20 April 1899) *French chemist & crystallographer.*

Father of GEORGES FRIEDEL, Charles Friedel studied at the Sorbonne in Paris. He qualified in both chemistry and mineralogy and in 1856 was made curator of the collection of minerals at the École des Mines. In 1871 he became an instructor at the École Normalé and from 1876 was a professor of mineralogy at the Sorbonne. Together with the U.S. chemist James Mason Crafts [1839-1917], he discovered the Friedel-Crafts reaction, which is useful in organic synthesis. Throughout his career, Friedel successfully combined his interests in chemistry and minerals, and authored important studies of pyroelectricity and of artificial synthesis of minerals.

REFERENCES: ABF: I 423, 376-380; II 276, 142-145. • Barr, *Index to Biographical Fragments*, 1973: 91. • *Bulletin de la Société Française de Minéralogie*: 23 (1900), no. 2, 171-90, portrait. • *Encyclopaedia Britannica*, 11th edition. • Poggendorff: 3, 475-6, 4, 458-9 & 5, 397. • Sarjeant, *Geologists*, 1980: 2, 1044-5. • Smith, *Tourchbearers of Chemistry*, 1949. • WBI. • *World Who's Who in Science*: 609. • *Zentralblatt für Mineralogie*: Jg. 1900, 53-68 [by M. Bauer].

1754. — French, 1893 [First edition].

Cours de Minéralogie professé à la Faculté des Sciences de Paris ... Minéralogie générale. Paris, 1893.

8°: iii, 416 p. VERY SCARCE.

REFERENCES: BL: [07109.h.29.]. • Dana's 7th (Bibliography): 71.

1755. Another edition, 1904: École Des Mines | De Saint-Étienne | [rule] | Cours De Minéralogie | Par | M. Friedel | [ornament] | Saint-Étienne | Société De L'Imprimerie Théolier. — J. Thomas Et Cie | 12, rue Gérentet, 12 | [short rule] | 1904.

4°: SCARCE.

REFERENCES: NUC.

FRIEDEL, Georges. (BORN: Mulhouse, France, 19 July 1865; DIED: Strasbourg, Alsace, France, 11 December 1933) *French crystallographer.*

Son of CHARLES FRIEDEL, Georges Friedel formulated basic laws concerning the external morphology and internal structure of crystals. He recognized, in 1892, that liquid crystals had three types of organization (mesophases). In 1893, he became professor at the École des Mines in Saint-Étienne. After World War I, he moved to the University of Strasbourg. Illness caused his premature retirement in 1930.

REFERENCES: *Bulletin de la Société Française de Minéralogie*: 57 (1934), 144-183, portrait. • DSB: 5, 185-7. • Sarjeant, *Geologists*, 1980: 2, 1045 & Suppl. 2 (1995), 1, 634. • *World Who's Who in Science*: 609.

1756. — French, 1904.

Étude | Sur Les | Groupements | Cristallins | Par | G. Friedel | [...2 lines of titles and memberships...] | [short rule] | Extrait du Bulletin de la Société de l'Industrie minérale. | Quatrième série. — Tomes III et IV. | [short rule] | Saint-Étienne | Société De L'Imprimerie Théolier. — J. Thomas Et Cie | 12, Rue Gérentet, 12 | [short rule] | 1904.

8°: VERY SCARCE.

REFERENCES: BL: [no copy listed].

1757. — French, 1911 [First edition].

Cours de l'Ecole Nationale des Mines de Saint-Étienne | [rule] | Leçons | De | Cristallographie | Par | G. Friedel | [...2 lines of titles and

memberships... | [rule] | Avec 383 figures dans le
texte | [rule] | Paris | Librairie Scientifique A.
Hermann Et Fils | Libraires De S.M. Le Roi De
Suède | 6, Rue De La Sorbonne, 6 | [short rule] |
1911.

8°: [i]-vi, [1]-310 p.

VERY SCARCE. First edition of this great classic of crystallography. "As a teacher Friedel exerted an enormous influence, which is still felt: his admirable textbook *Leçons...* was reprinted in 1964. Its often quoted preface, entitled 'A Warning' is a sort of scientific testament, stressing the importance of meticulous observation and scrupulous acceptance of well-established facts". (Dictionary of Scientific Biography V/185-86-87).

2nd edition, 1926: *Leçons de Cristallographie* Professeurs à la Faculté des Sciences de Strassbourg. Nancy-Paris-Strassbourg, Berger Levrault, 1926. 8 I: [i]-xix, [1]-602 p., 578 figures.

REFERENCES: BL: [no copy listed].

FRISCH, Jodocus (Joseph) Leopold. (BORN: Berlin, Germany, 29 October 1714; DIED: Grüneberg, Schlesien, Germany, 1787) *German theologian & naturalist.*

Son of scientifically inclined evangelistic preacher, Frisch was a pastor at Cottwitz & Glogau (1742-7), at Schwenitz near Grüneberg (1747-52) and at Sabor (1752-65). He retired to Grüneberg in Schlesien.

REFERENCES: *Biographie Universelle*: 15, 203. • DBA: I 352, 116-123; II 409, 97. • Ersch & Gruber, *Allgemeine Enzyklopädie*, 1818-89: 50, 221-2. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • *Nouvelle Biographie Générale* (Hoefler): 18, cols. 887-8. • Poggendorff: 1, col. 805. • WBI.



MVSEI HOFFMANNIANI, 1741

1758. — German, 1741 [Collection catalog].

Mvsei Hoffmanniani | Petrefacta Et Lapides | Oder
| Ausführliche Beschreibung | Der | Versteinerten

Dinge | Und anderer | Curieusen und raren
Steine | Welche in dem | Vollständigen Cabinet
| Herrn D. Friederich Hoffmanns | [...2 lines of
titles and memberships...] | befindlich sind, | Mit
Genehmhaltung des Herrn Geheimen Rathes |
abgefasst | Von | Jodocus Leopold Frisch, aus
Berlin, | der Gottesgelartheit und Weltweisheit
Beflissenen. | [ornate rule] | Halle, Zu finden in der
Rengerischen Buchhandlung. 1741.

4°: [12], 119, [1] p. PAGE SIZE: 202 x 164 mm.

RARE. Complete descriptive catalog of the petrifications and other curious and rare stones and minerals, which were contained in the outstanding cabinet of Friedrich Hoffmann. Schröter considers the descriptions to be far too brief, incomplete and unreliable. At the conclusion of the catalog is a bibliography of the works referenced in the text. The *Mineralienkabinett* was acquired in 1777 by Johann Goldhagen and incorporated into his own natural history collections. Subsequently, in 1787, Goldhagen's collections were purchased by the University of Halle. The remains of it are held there today.

Friedrich Hoffmann. (BORN: Halle, Germany, 19 February 1660; DIED: Halle, Germany, 12 November 1742) *German physician.* Hoffmann was the son of Friedrich Hoffmann [1626-1675], a well-known municipal physician of Halle. In 1675, he lost both his parents and a sister within a few days. In his youth, he was educated at home, including instruction in anatomy and pharmacology. From 1678 to 1680, he studied medicine at the University of Jena, receiving his M.D. in 1681. Afterward, Hoffmann embarked on an extended tour of Belgium, Holland, and England, studying medical methods. In 1681, he accepted a position at the University of Jena, but soon left due to jealousy from the senior faculty. For the next decade he successfully practiced his craft in Minden and Halberstadt. In 1693, Hoffmann was named the first professor of medicine at the University of Halle and charged with organizing the medical school. Except for a couple of tenures as court physician in Berlin, he remained in Halle.

Johann Friedrich Gottlieb Goldhagen. (BORN: Nordhausen, Germany, 1742; DIED: Halle, Germany, 10 January 1788) *German physician & medical writer.* In 1769 Goldhagen was named professor extraordinary of philosophy and natural history at the University of Halle. In 1778 he was appointed professor of medicine and was given the title of city physician. During his lifetime he built an extensive natural science collection, which was among the most important in Europe. Included was a large component of mineralogical specimens, rocks and fossils. In 1787, his collections were purchased for 2,500 thaler by the University.

REFERENCES: BL: [458.a.17.]. • Cobres, *Deliciae Cobresianæ*, 1782: 1, 121. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 8. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 261-2. • *Leipziger gelehrte Zeitung*: 1742, 54. • LKG: XV 11. • Murray, *Museums*, 1904: 2, 289. • NUC: 186, 215 [NF 0398055]. • Roller & Goodman, *Catalogue*, 1976: 1, 425. • Schröter's *Journal für die Liebhaber*: 1 (1772), pt. 1, 19-20 [review]. • Wilson, *History of Mineral Collecting*, 1994: 213. (Hoffmann) ADB: 12, 584-8. • *Catalogue of Portraits of Naturalists*: 587-8 [9 portraits listed]. • DBA: I 552, 141-245; II 601, 4-43. • DSB: 6, 458-61 [by G.B. Risse]. • Hirsch, *Biographisches Lexikon*, 1884-8: 3, 256-9. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon, Supplement*. • NDB. • Poggendorff: 1, cols. 1122-3. • Schaedler, *Biographisch*

FRISCH

Handwörterbuch, 1891: 53. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 176. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 296. (Goldhagen) *Biographie Universelle*. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 593 [by W. Pagel]. • *Nouvelle Biographie Générale* (Hoefer). • Wilson, *History of Mineral Collecting*, 1994: 172-3.

1759. — German, 1741.

Untersuchung | Natürlicher Dinge. | Erstes Stück,
| in welchem | Die eigenlichen Fossilien mit
wahrhaften Namen benennet, | gehörig beschreiben
und Eingeteilt, | dabey auch | von allen gebildeten
Steinen eine kurze Eintheilung gemacht | und deren
Unterschied allen Anfangern in der | Naturhistorie
| zum Nutzen gezeiget worden | von | Jodocus
Leopoldus Frisch. | [ornament] | 1741.

4°: A-B⁴; 8ℓ.; [16] p.

VERY RARE. Apparently the only part published of a work that would have described items of nature, including minerals. This portion concerns stones and earths, and includes descriptions of the species together with locality information. It includes a new system of mineralogical classification devised by the author.

REFERENCES: BL: [B.378.(13.)]. • Cobres, *Deliciae Cobresianae*, 1782: 1, p. 121. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 25. • LKG: XII 21. • NUC: [no copy listed].



DIE WELT IM FEUER, 1746

1760. — German, 1746 [First edition].

[In black:] Die | [in red:] Welt [in black:] im [in red:]
Feuer, | [in black:] Oder das | Wahre Vergehen |
und | [in red:] Ende [in black:] der [in red:] Welt, | [in
black:] Durch den letzten | Sünd=Brand; | [rule] |
[in red:] Nebst 12 illuminirten Kupffern. | [in black,
rule] | deutlich vorgestellt | von | [in red:] Jodoc.
Leopold. Frisch, | [in black:] Ev. Pr. zu K. in S. |
[rule] | Sorau, bey Gottlob Hebold, Buchh. 1746.

4°: [16], 175, [1] p., 12 engraved plates (hand-colored; depictions of the world). Title printed in red and black. PAGE SIZE: 198 x 160 mm.

VERY SCARCE. This is a curious mixture of science and theology being a history of the physical world from creation to its presumed fiery end. Frisch discusses the geology and mineralogy of the Earth, the nature of light and the elements, and asks questions like "what among all things will pass or will melt?", "what kind of fire will it be?", etc. All is considered in light of the creation and the millennium, with the general theological overtones. Frisch references Bernhard Wagners' *Tractatus Theologicus de Fine Mundi* (Leipzig, 1699) throughout his text. The plates show the earth in different stages since its creation, and other physical phenomena including the refraction of the sunbeams.

REFERENCES: BL: [4257.d.5.]. • NUC: [no copy listed].

1761. 2nd edition, 1747: Die Welt im Feuer, oder das Wahre Vergehen und Ende der Welt, durch den letzten Sünd-Brand; nebst 12 illuminirten Kupffern, deutlich vorgestellt von Jodoc. Leopold Frisch ... Zweyte Auflage. Sorau, Bey Gottlob Hebold, 1747.

4°: [16], 175, [1] p., 12 engraved plates (hand-colored; depictions of the world). Title printed in red and black.

VERY SCARCE. An slightly corrected reissue of the 1746 edition.

REFERENCES: BL: [4257.d.13.]. • Honeyman Sale: no. ?? • Hoover Collection: no. 324. • NUC: [no copy listed].

FRISCH, Samuel Gottlob. *German preacher & biographer.*

REFERENCES: DBA: I 352, 195-214. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • *Neuer Nekrolog der Deutschen*. • WBI.

1762. — German, 1825.

Lebensbeschreibung Abraham Gottlob Werners von d. Samuel Gottlob Frisch. Nebst zwei Abhandlungen über Werners Verdienste um Oryktognosie und Geognosie von Christian Samuel Weiss. Leipzig, F.A. Brockhaus, 1825.

16°: xviii, 275, [1] p.

VERY SCARCE. Biography of Abraham Gottlob Werner.

REFERENCES: BL: [1451.c.25.]. • Hoover Collection: no. 325. • Roller & Goodman, *Catalogue*, 1976: 1, 425.

FRÖBEL, Julius. (BORN: Griesheim near Stat-Ilm, Schwarzburg, Gemany, 16 June 1806; DIED: Zurich, Switzerland, 6 November 1893) *German author & mineralogist.*

Fröbel was professor of history, geography and natural history at the Canton School at the University of Zurich. In 1873, he traveled to Algeria and Sumaria.

REFERENCES: ADB: 49, 163-72. • DBA: I 354, 116-121. • Poggendorff: 1, col. 810 & 3, 481-2. • WBI.

1763. — German, 1843 [First edition].

Grundzüge eines Systems der Krystallographie. Zurich, 1843.

8°:

SCARCE. This work provides an introduction into the systems of crystallography.

REFERENCES: BL: [1255.a.1.]. • Dana's 7th (Bibliography): 71.

1764. 2nd edition, 1847: Grundzüge eines Systems | der | Krystallographie oder der | Naturgeschichte Der Unorganischen | Individuen, | von | Julius Fröbel, | Dr. d. Philos., Prof. a.d. Univers. u.d. Indust.- Sch. zu Zurich. | [ornate rule] | Zweite Auflage. | [ornate rule] | Leipzig, | Verlagsbureau. | 1847. | Druck von Otio Wigend.

8°: π¹ 1-5⁸ 6⁵; 46ℓ.; [2], [1]-89, [1] p. PAGE SIZE: 186 x 116 mm. SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-89, Text.; [1 pg], Blank.

REFERENCES: BL: [8072.e.38.]. • Dana's 7th (Bibliography): 71.

FUCHS, Carl Wilhelm C. (BORN: Mannheim, Germany, 1837; DIED: Karlsruhe, Germany, 26 July 1886) *German geologist*.

In 1876 Fuchs was appointed professor extraordinary at the University of Heidelberg. He carried on extensive research of volcanoes in Italy.

REFERENCES: Poggendorff: 3, 484 & 4, 467. • Prauss, Stanislaw. "Karol Fuchs," *Wszechśw.*, no. 5 (1886), p. 527. • Sarjeant, *Geologists*, 1980: 2, 1049.

1765. — German, 1868 [First edition].

Anleitung | zum | Bestimmen der Mineralien | von | Dr. C.W.C. Fuchs, | a.o. Professor and der Univrsität zu Heidelberg. | [rule] | I. Tafeln zur Bestimmung der Mineralien durch das Löhrrohr. | II. Tafel zur Bestimmung der Mineralien durch physikalische | Kennzeichen. | [rule] | Heidelberg; | Ernst Carlsbach. | 1868.

8°: viii, 144 p.

VERY SCARCE. An introduction into the determination of minerals through the use of the blowpipe and physical characteristics.

REFERENCES: BL: [7104.bb.15.].

1766. 2nd edition, 1875: Anleitung zum Bestimmen der Mineralien, ... Zweite vermehrte und verbesserte Auflage. Giessen, J. Ricker, 1875.

8°: viii, 144 p., tables. VERY SCARCE.

REFERENCES: BL: [7104.aaa.2.].

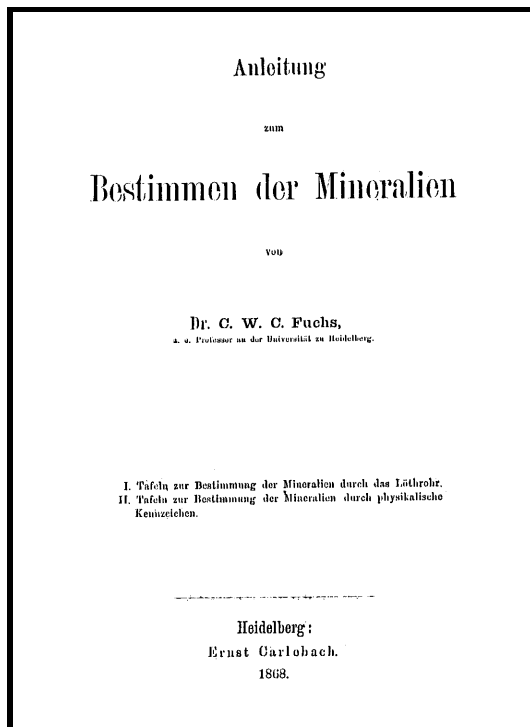
1767. 3rd edition, 1890: Anleitung zum Bestimmen der Mineralien von C.W.C. Fuchs. 3. Aufl., neu bearb., verm. und erw. von Aug. Streng. Giessen, J. Ricker, 1890.

8°: 204 p., illus.

VERY SCARCE. Edited by August Streng [1830-1897].

1768. 4th edition, 1898: Anleitung | zum | Bestimmen der Mineralien | von | Prof. Dr. C.W.C. Fuchs. | Vierte Auflage | neu bearbeitet | von | Dr. Reinhard Brauns, | Professor an der Universität Giessen. | [ornament] | Giessen | J. Ricker'sche Verlags-Buchhandlung | 1898.

8°: 234 p., 27 illus.



ANLEITUNG , 1868

SCARCE. A new edition of Fuchs' *Introduction to the Determination of Minerals*, prepared by REINHARD BRAUNS, in succession to Prof. Streng.

REFERENCES: *Mineralogical Magazine*: 12 (1898), 43.

1769. 5th edition, 1907: Anleitung zum Bestimmen der Mineralien. Neu bearbeitet von Reinhard Brauns. Giessen, Töpelmann 1907.

8°: [4], 220 p., 28 illus.

VERY SCARCE. Edited by REINHARD ANTON BRAUNS.

1770. 6th edition, 1913: Anleitung zum Bestimmen der Mineralien ... Sechste Auflage, neu bearbeitet von Reinhard Brauns ... Mit 27 Abbildungen im Text. Giessen, 1913.

8°: 223 p., 27 illus.

VERY SCARCE. Edited by REINHARD ANTON BRAUNS.

Another edition, 1930: Anleitung zum Bestimmen der Mineralien. Mit 27 Abbildungen im Text. Neu bearbeitet von Reinhard Brauns. Giessen, Alfred Töppelmann, 1930. 218 p., 27 illus.

REFERENCES: BL: [7106.ee.16.].

1771. English transl., 1868: Practical Guide | To The | Determination Of Minerals | By The Blowpipe. | By Dr. C.W.C. Fuchs, | Professor In The University Of Heidelberg. | Translated and Edited by | T.W. Danby, M.A., F.G.S., | Fellow Of Downing College, Cambridge; Associate Of The Royal School Of Mines; | Etc., Etc., Etc. | [ornate rule] | London: | Published By Field And Tuer, | 50, Leadenhall Street, E.C.; | Simpkin, Marshall, And Co., Stationers' Hall Court, E.C. | Philadelphia: Claxton, Remsen, And Haffelfinger, 624, 626, And 628, | Market Street.

8°:

SCARCE. Translation by T.W. Danby of *Anleitung zum Bestimmen der Mineralien* (Heidelberg, 1868).

1772. French transl., 1873: Guide Pratique pour la détermination des minéraux ... Traduit de l'allemand par

FÜHNER

A. Guérout. Paris, Hâvre, 1873.

8°: viii, 147 p

VERY SCARCE. Translation by August Guérout of *Anleitung zum Bestimmen der Mineralien* (Heidelberg, 1868).
REFERENCES: BMC.

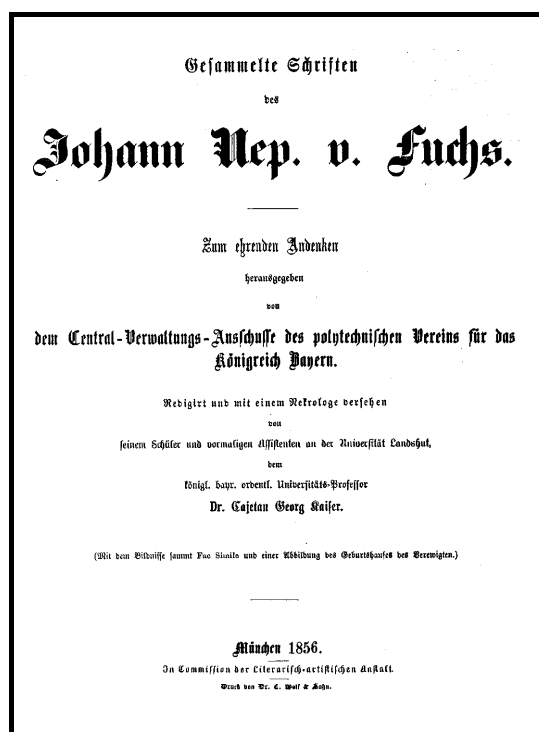
1773. — German, 1875.

Die | Künstlich Dargestellten Mineralien, | Nach
| G. Rose's Krystallo-chemischen Mineralsysteme
geordnet | Von | Dr. C. W. C. Fuchs, | Professor
in Heidelberg. | [rule] | Eine Von Der Holländischen
Gesellschaft Der Wissenschaften In Haarlem |
An 20 Mai 1871 Gekrönte Preisschrift. | [rule] |
(Natuurkundige Verhandelingen, 3de Verz. Deel I).
| [rule] | Haarlem, | De Erven Loosjes | 1872.
8°: 174 p.

VERY SCARCE. Series : Hollandsche Maatschap-
pif der Wetenschappen, Haarlem Natuurkundige ver-
handelingen. 3e Verzameling, deel I Notes : "Natu-
urkundige Verhandelingen, 3de verz, deel 1." "Eine von
der Holländischen Gesellschaft der Wissenschaften in
Haarlem an 20. mai 1871 gekrönte Preisschrift."

Subject : Mineralogical chemistry.

Artificial Minerals



GESAMMELTE SCHRIFTEN, 1856

FUCHS, Johann Nepomuk von. (BORN: Mattenzell, Bavaria, Germany, 15 March 1774; DIED: Munich, Bavaria, Germany, 5 March 1856) *German geologist.*

REFERENCES: ADB: 8, 165. • Barr, *Index to Biographical Fragments*, 1973: 92. • DSB: 5, 202-3. •

Encyclopaedia Britannica, 11th edition. • *ISIS*, 1913-65: 1, 446. • NDB: 5, 680 [by R. Zaunick]. • Poggendorff: 1, cols. 814-5. • Sarjeant, *Geologists*, 1980: 2, 1049. • *World Who's Who in Science*: 1733.

1774. — German, 1856 [Collected works].

Gesammelte Schriften | des | Johann Nep. v.
Fuchs. | [rule] | Zum ehrenden Andenken |
herausgegeben | von | dem Central-Verwaltungs-
Ausschusse des Polytechnischen Vereins für des
| Königreich Bayern. | Redigirt und mit einem
Nekrologe versehen | von | seinem Schüler
und vormaligen Assistenten an der Universität
Landshut, | dem | königl. bahr. ordentl.
Universitäts-Professor | Dr. Cajetan Georg Kaiser.
| (Mit dem Bildnisse sammt Fac Simile und einer
Abbildung des Geburtshauses des Verewigten.) |
[rule] | München 1856. | [short rule] | In Commission
der Literarisch-artistischen Anstalt. | [short rule] |
Druck von Dr. C. Wolf & Sohn.

4°: xxviii, 297 p., portrait, one plate, illus. Added
title: *Des Mineralogen und Chemikers Joh. Nepomuk
von Fuchs gesammelte Schriften.*

VERY SCARCE. Edited by Cajetan Georg Kaiser
[1803-1871], this is the collected writing of Johann
Nepomuk von Fuchs.

REFERENCES: BL.

FÜHNER, Hermann Georg. (BORN: 1871; DIED:
1944) *German physician & pharmacist.*

1775. — German, 1902 [Dissertation].

Lithotherapie. | [wavy rule] | Historische Studien |
über die medizinische Verwendung | der Edelsteine.
| Erweiterter Abdruck der | gleichnamigen
Inaugural-Dissertation | von | Dr. phil. et med.
Hermann Fühner. | [ornate rule] | Berlin | Verlag
von S. Calvary & Co. | 1902.

8°: [6], [1]-150 p. Bibliography, pp. 145-50. PAGE
SIZE: 224 x 156 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg],
Dedication.; [1 pg], Blank.; [2 pgs], "Inhaltsübersicht."; [1]-2, "Einleitung."; [3]-47, "Allgemeiner Teil."; [48]-144, "Spezieller Teil."; 145-150, "Verzeichnis | der | benützten Litteratur."

VERY RARE. Basing his study on published
lapidaries but not manuscripts, this is a pioneering
study in the history of precious stones as they were
used in early medicine. It is an enlarged version of the
author's doctoral dissertation on the same topic. The
text describes how these minerals were used by people
in India, China, the Middle East from prehistoric times
through the Middle Ages. In addition, a systematic
description of each gemstones properties is given with
citations to the literature and to the diseases that the
individual stones would treat.

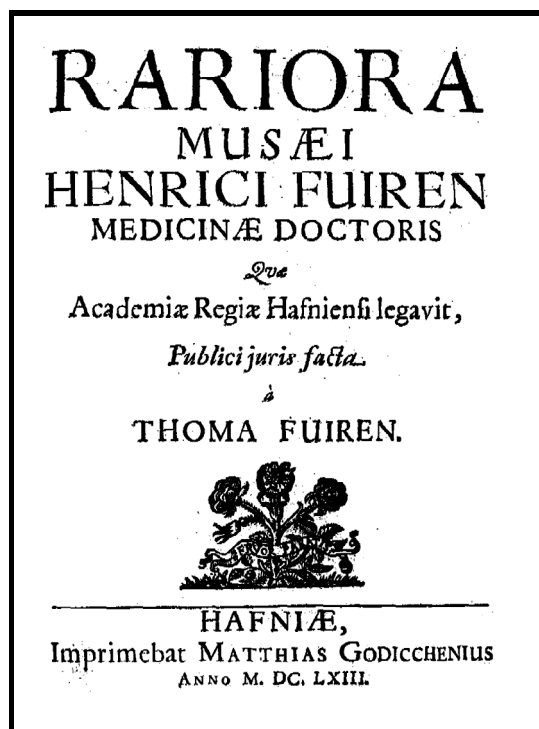
Facsimile reprint, 1956: Ulm-Donau, Karl F. Haug,
[1956]. [4], [1]-150 p.

REFERENCES: Riddle, *Lithotherapy in the Middle Ages*,
1970. • Sinkankas, *Gemology Bibliography*, 1993: no. 2264.

FUIREN, Thomas. (BORN: 1623; DIED: 1675) *Danish physician & naturalist.*

He built a museum of natural and artificial rarities, that also contained minerals.

REFERENCES: *Biographie Universelle*. • *Dansk Biografisk Lexikon*. • *Nouvelle Biographie Générale* (Hoefer). • Wilson, *History of Mineral Collecting*, 1994: 171.



RARIORA MUSÆI, 1663

1776. — Latin, 1663 [Collection catalog].

Rariora | Musæi | Henrici Fuien | Medicinæ
Doctoris | Qvæ | Academiæ Regiæ Hafniensi
legavit, | Publici juris facta | à | Thoma Fuien. |
[ornament] | [rule] | Hafniæ, | Imprimebat Mattahias
Godicchenius | Anno M. DC. LXIII.

4°: A-C4 D1; 13ℓ.; no pagination.

CONTENTS: [A1r], Title page.; [A1v], Blank.; A2r-D1r,
Text.; D1v, Blank.

VERY RARE. This catalog provides a listing of specimens contained in the Copenhagen physician Henrick Furiens [1614-1659] museum, which together with a valuable library were bequeathed to the University of Copenhagen. The text provides the names of the various specimens and includes shells, minerals, plants, etc. It was compiled by Thomas Fuien, the brother of Henrick after the later's death. Thomas had previously cataloged the library in *Catalogus Bibliothecæ Henrici Furien* (Hafniæ, 1660).

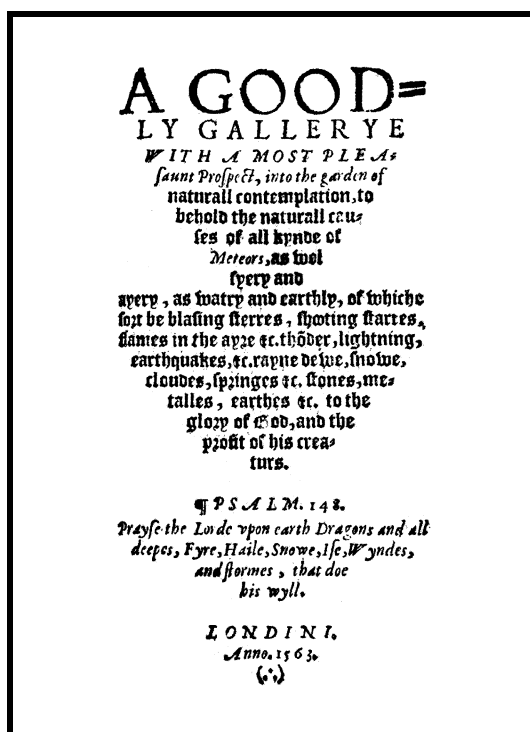
This text of this catalog originally appeared in Thomas Bartholin's *Domus Anatomica* (Hafniæ, 1662), p. 41.

REFERENCES: BL: [728.c.37.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 282. • Murray, *Museums*, 1904: 1, 38 & 2, 249. • Wilson, *History of Mineral Collecting*, 1994: 212.

FULKE, William. (BORN: London, England, 1538; DIED: London, England?, 1589) *English author.*

After studying at St Paul's School, Fulke attended St John's College, Cambridge and graduated in 1558. Finding he was not interested in his studies of law, he turned to mathematics, languages and theology. He authored many works in defense of Protestantism and in refuting the doctrines of the church of Rome. One particularly interesting non-theological works was a fantasy of an astronomical game in the manner of chess.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 433, 165-209. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



GOODLY GALLERYE, 1563

1777. — English, 1563 [First edition].

A Good= | ly Gallerye | With A Most Plea=
| saunt Prospect, into the garden of | naturall
contemplation, to | behold the naturall cau= | ses
of all kynde of | Meteors, as wel | fyery and | aery,
as watry and earthly, of whiche | sort be blasing
sterres, shooting starres, | flames in the ayre &c.
thöder, lightning, | earthquakes, &c. rayne dewe,
snowe, | cloudes, springes &c. stones, me= | talles,
earthes &c. to the | glory of God, and the | profit
of his crea= | turs. | ¶ Psalm. 148. | Prayse the

Lrode vpon earth Dragons and all | deepes, Fyre, Haile Snowe, Ise, Wyndes, | and stormes, that doe | his wyll. | Londini, Anno. 1563. | [ornament].

8^o: π^4 (π^1 blank) A-H⁸ I7; 75 ℓ .; Foliated I-71. Black letter, with some italics. COLOPHON: Impryted [sic] | at London in Fletestreate, at the | signe of the Faucone, by William | Griffith: and they are to be sold | at his shop in S. Dunstones | churchyarde in the | Weste. | 1563.

CONTENTS: π^1 , Blank.; π^2 r, Title page.; π^2 v, Blank.; π^3 r- π^4 v, Dedication.; A1r, "The first Booke."; A6v, "The seconde Booke of fyery Meteores."; C1v (ℓ . 18), "The thirde Booke of aery impressions."; H6r, "The fift booke of earthly Meteores or bodies perfectly mixed."; I7v, Colophon.

EXTREMELY RARE. A handbook of contemporary knowledge on meteorology and geology in general, derived from classical and medieval sources. Chapters at the end describe metals and include discussions of alchemy and lodestone. This text went through five issues between 1602 and 1640.

Modern commentary, 1979: *A goodly gallerye: William Fulke's book of meteors (1563)*. Edited with an introduction and notes by Theodore Hornberger. Philadelphia: American Philosophical Society, 1979. 121 p. Published as: *American Philosophical Society, Philadelphia. Memoirs*, v130.

REFERENCES: Hornberger, *Introduction*, 1979: p. 12-3. • STC: 11435.

1778. 2nd edition, 1571: [Contained within an ornamental border:] A goodly Gallery vvith | a most pleasaunt Prospect, into | the garden of naturall contem- | plation, to beholde the na= | turall causes of all kind | of Meteors. | As well fyery and avery, as watry | annd earthly, of which sorte be blasing | Starres, shootinge Starres, flames | in the ayre &c. thonder, Lightninge, | Earthquakes. &c. Rayne Dew, snowe | Cloudes, Springes. &c. Stones, | Metalles, Earthes. To the | glory of God, and the | profite of his | creatures. | ¶ Psalme 148. | ¶ Prayse the Lord vpon Earth, | Dragons & all depes, Fyre, Haile | Snowe, Ise, Vvinds, and stormes | that do his will. | Imprinted at London, in Fletestrete | by Wylliam Gryffith. 1571.

8^o: π^4 (π^1 blank) A-H⁸ I7; 75 ℓ .; Foliated I-71 (A1-I7). Black letter.

RARE. A reissue of sheets A-I of the 1563 printing with a new title page and a new setting of the dedication.

REFERENCES: Hornberger, *Introduction*, 1979: p. 13. • STC: no. 11436.

1779. 1602: [Contained within an ornamental border:] A most pleasant Prospect | into the garden of naturall Con- | tmplation, to behold the na- | turall causes of all kinde of | Meteors: | As well fiery and avery, as watry and earthly: of | which sort of blazing Starres, shooting Starres, | flames in the ayre, &c. Thunder, Lightning, | Earthquakes, &c. Rayne Dewe, Snow, | Clouds, Springs, &c. Stones, Metals, | and Earths: To the glory of | God, and the profit of his | creatures. | By W. Fulke Doctor of Diuinitie. | Prayse the Lord vpon earth, Dragons | and all deppes, Fyre, Hayle, Snowe, | Ice, Windes and stormes that doe | his will, Psal. 148. | At London | Printed for William Leake, dwel- | ling in Pauls Church-yard, at the signe of | the holy Ghost. 1602.

8^o: ¶⁴ (¶¹ blank) A-H⁸ I7; 75 ℓ .; Foliated 2-71 (A2-I7). Black letter.

RARE. Except for occasional deviations, a page for page reprint of the earlier editions. That the printer was Simon Stafford may be inferred from the title page border.

REFERENCES: Hornberger, *Introduction*, 1979: p. 13-4. • McKerrow & Ferguson, *Title-Page Borders*, 1932: 86. • STC: 11438.

1780. 1634: A | Most pleasant Prospect | Into the Garden of | Naturall Contemplation, to | behold the naturall causes of | all kinde of Meteors: | As well fierie and airie, as watrie and | earthly: of which sort the blazing Starres, | shooting Starres, Flames in the Aire, &c. Thunder, | Lightning, Earthquakes, &c. Raine, Dew, Snow, | Clouds, Springs, &c. Stones, Metals, and | Earths; To the glorie of God, and | the profit of his creatures. | By W. Fulke Doctor of Divinitie. | Praise the Lord vpon earth, Dragons, and all Deepes, | Fire, Haile, Snow, Ice, Winds and Stormes that | doe his will. Psal. 148. | The second Edition corrected and amended. | [rule] | London, | Printed by Iohn Haviland, and are to be sold by | James Boler dwelling at the Marygold | in Pauls Church-yard. 1634.

8^o: ¶⁴ (¶¹ blank) A-H⁸ I7; 75 ℓ .; Foliated 2-71 (A2-I7). Black letter.

RARE. Sheets reused from the 1602 printing with a new title page.

REFERENCES: Hornberger, *Introduction*, 1979: p. 14. • STC: 11439.

1781. 1639: A | Most pleasant Prospect. | Into The Garden | of Naturall Contemplation, | to behold the naturall causes of | all kinde of Meteors. | As well fiery and airie, as watrie and | earthly: of which sort the blazing Starres, | shooting Starres, Flames in the Aire, &c. | Thunder, Lightning, Earthquakes, &c. Raine, Dew, | Snow, Clouds, Springs, &c. Stones, Metals, and | Earths: To the glory of God, and the | profit of his creatures. | By W. Fulke Doctor of Divinity. | Praise the Lord upn earth, Dragons, and all Deepes; | Fire, Haile, Snow, Ice, Windes and Stormes that doe | his will. Psal. 148. | The third Edition corrected and amended. | [rule] | London. | Printed by E.G. for William Leake, and are to be | sold at his shop betwixt the Rowles, and | Sargents Inne. 1639.

8^o: ¶⁴ (¶¹ blank) A-H⁸ I7; 75 ℓ .; Foliated 2-71 (A2-I7). Black letter.

RARE. Other than slight deviations, a page-for-page reprint of the earlier editions.

REFERENCES: Hornberger, *Introduction*, 1979: p. 14-5. • STC: 11440.

1782. 3rd edition, 1640: A | Most pleasant Prospect. | Into The Garden | of Naturall Contemplation, | to behold the naturall causes of | all kinde of Meteors. | As well fiery and airie, as watrie and | earthly: of which sort the blazing Starres, | shooting Starres, Flames in the Aire, &c. | Thunder, Lightning, Earthquakes, &c. Raine, Dew, | Snow, Clouds, Springs, &c. Stones, Metals, and | Earths: To the glory of God, and the | profit of his creatures. | By W. Fulke Doctor of Divinity. | Praise the Lord upn earth, Dragons, and all Deepes; | Fire, Haile, Snow, Ice, Windes and Stormes that doe | his will. Psal. 148. | The third Edition corrected and amended. | [rule] | London. | Printed by E.G. for William Leake, and are to be | sold at his shop in Chancery-lane neere | the Rowles. 1640.

8^o: ¶⁴, A-I⁸. PAGE SIZE: 3.5 x 5.6 in.

RARE. Sheets of the 1639 edition with a variant title page. In the preface to this work, Fulke writes "For as much as wee entend in this Treatise, to declare the causes of all those bodies, that are generated in the earth, called Fossilia, as well as those other Impressions, named of their height Meteors (which no writer hitherto hath done, that we have seen) the common definition given by the most Writers, in no wise will serve us..."

REFERENCES: Hornberger, *Introduction*, 1979: p. 15. • STC: no. 11441. • Wellcome Catalog (Books): 1, no. 2474.

1783. 1654: [Contained within a box of single rules:] Meteors: | Or, | A plain Descripti- | on of all kind of Meteors, | as well as Fiery and Ayrie, as | Watery and Earthy: | Briefly | Manifesting the Causes of | all Blazing-Stars, Shooting-Stars, | Flames in the Aire, Thunder, | Lightning, Earthquakes, | Rain, Dew, Snow, Clouds, | Springs, Stones, and | Metals, | By W.F. Doctor in | Divinitie. | London, | Printed for William Leake at the

Crown | in Fleet-street, between the two Temple | Gates, 1654.

8°: a⁴ A-L⁸; 91ℓ.; [8], 1-174, [2] p. Title within rules, ornamental initials and headpieces.

RARE. Fulkes astronomical and meteorological treatise had been first published in 1563 under title *A goodly gallerye with a most pleasant prospect, into the garden of naturall contemplation, to behold the naturall causes of all kynde of meteors*. It is here enlarged by an anonymous second part "Observations on Dr. F. his booke of meteors. By F.W." p(p. [157]-174.) Fulke uses the term Meteor to advance a unified theory of the earth and heavens as a series of effusions generated by the earth itself, namely the fiery; the airy; the watery; and the earthy. Within this framework he considers the nature and causes of comets, shooting stars, the aurora and other aerial phenonmena; clouds and storms; the nature of the rainbow (advancing a theory of the rainbow as light refracted through water vapour); rivers, lakes, hot springs and the sea; and the types of metals and minerals found within the earth. The work was evidently composed while Fulke was at Cambridge, from whence he graduated in 1563, and predates his celebrated Puritan polemics by nearly a decade. This scarce edition of 1654 list quartos of *Othello* and *The Merchant of Venice* among the books advertised by William Leake.

REFERENCES: Hoover Collection: no. 328. • Hornberger, *Introduction*, 1979: p. 15-6. • Wing: F-2260.

1784. 1655: [Contained within a box of single rules:] Meteors: | Or, | A plain Descripti- | on of all kind of Meteors, | as well as Fiery and Ayrie, as | Watery and Earthy: | Briefly | Manifesting the Causes of | all Blazing-Stars, Shooting-Stars, | Flames in the Aire, Thunder, | Lightning, Earthquakes, | Rain, Dew, Snow, Clouds, | Springs, Stones, and | Metals, | By W.F. Doctor in | Divinitie. | London, | Printed for William Leake at the Crown | in Fleet-street, between the two Temple | Gates, 1655.

8°: a⁴ A-L⁸; 91ℓ.; [8], 1-174, [2] p. Title within rules, ornamental initials and headpieces. RARE.

REFERENCES: Hornberger, *Introduction*, 1979: p. 16. • Wing: F-2260a.

1785. 1670: [Contained within a border of rules:] Meteors; | Or, | A plain Description | of all kind of Meteors, | as well Fiery and Ayrie, as | Watry and Earthy: | Briefly | Manifesting the Causes of | all Blazing-Stars, Shooting-Stars, | Flames in the Aire, Thunder, | Lightning, Earthquakes, Rain, Dew, Snow, Clouds, | SPsprings, Stones, and | Metals. | [rule] | By W.F. Doctor in | Divinity. | [rule] | London, | Printed for William Leake, at the Crown | in Fleet-street, between the two | Temple Gates, 1670.

8°: a⁴ A-L⁸; 91ℓ.; [8], 1-174, [2] p. Title within rules, ornamental initials and headpieces. RARE.

REFERENCES: Hornberger, *Introduction*, 1979: p. 16. • Wing: F-2261.

FYODOROV, Evgraf Stepanovich. (BORN: Orenburg, Russian, 22 December 1853; DIED: Petrograd, Russia, 21 May 1919) *Russian crystallographer, geometrist, petrologist, mineralogist and geologist.*

Fyodorov studied mathematics indepentently while attending the St. Petersburg Military Engineering School, the Military Medical and Surgical Academy, and the Technological Institute. Upon graduating from the Mining Institute in 1883, Fyodorov took an appointment with the Mining Department where he was included in an expedition to explore the northern Urals. He extended a very strong influence on the developement of mineralogy and crystallography at the end of the nineteenth century. His clssification of symmetry groups of crystallized matter lead directly to the working out of a new nomenclature of systems and point group symmetries known as Fyodorov-Groth nomenclature. Fyodorov's goniometer modifications



FYODOROV (FEDEROV)

produced a revolution in the method of investigating minerals. Invented the universal stage (Fyodorov table) for petrographic microscopes that would locate the specimen at the center of two glass hemispheres (Fyodorov method).

REFERENCES: DSB: 5, 210-4. • *ISIS*, 1913-65: 1, 411. • Krüger, P., "Evgraf Stepanovič Fedorov (1853-1919)," (pp. 63-77) in: Guntau, M., ed., *Biographien bedeutender Geowissenschaftler der Sowjetunion: 19 biographischer Darstellung zu bedeutenden Gelehrten der russian sowjet. Geologiegeschichte*. Berlin, Akademie-Verlag, 1979. [Published as: *Schriftenreihe für geologische Wissenschaften, Berlin*, 14 (1979).]. • Poggendorff: 4, 409-10. • Sarjeant, *Geologists*, 1980: 2, 988. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 413. • Shafranovskii, I.I. and N.V. Belov, "In Memoriam: E.S. Fedorov," (pp. 341-50) in: Ewald, P.P., et al., ed., *Fifty years of X-ray diffraction*. Utrecht, International Union of Crystallographers, 1962. • *World Who's Who in Science*: 551. • Zvorykin, *Biograficheskii Slovar*, 1958: 2, 302-4.

1786. — Russian, 1890.

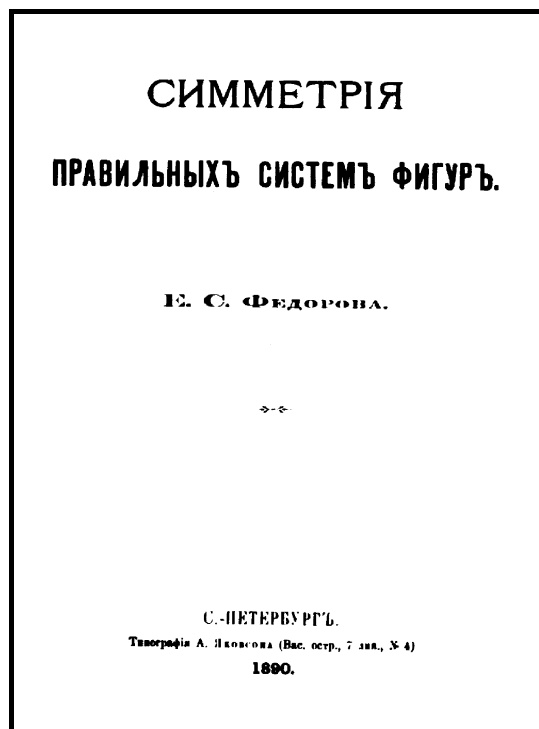
Симметрия | Правильныхъ Системъ Фигуръ. | Е.С. Федорова. | [ornate rule] | С.-Петербургъ. | Типография А. Яковсона (Вас. осгр., 7 диа, № 4) | 1890.

[TRANSLITERED TITLE:]

Simmetriia | Pravil'nykh Sistem Figur. | E.S. Fedorova. | [ornate rule] | S.-Peterburg. | Tipografiia A. Iakovsona (Vas. osgr., 7 dia, No. 4) | 1890.

8°: [1]-146 p.

VERY RARE. This is Fyodorov's classic work that provides the deduction of the possible 230 space groups that now serve as the mathematical basis of structural and crystallographic analysis. Early in his career, Fyodorov became interested in the relationship between symmetry and crystallography. Extending the previous work of BRAVAIS and SOHNCKE, Fyodorov focused his attention on the aggregate of point systems providing a complete derivation of real point systems and the derivation of all possible forms of crsytal structures with every group rigorously



SIMMETRIIA PRAVILNYKH SISTEM FIGUR, 1890

determined by an algebreic determination. *Symmetry of Real Systems of Configuration* outlines Fyodorov's methods that systematically developed the studies of symmetry as they pertain to natural crystals and shows conclusively that there are only 230 possible configures. Incredibly, the German crystallographer SCHOENFLIES almost simultanously derived the same configurations, although Fyodorov clearly had priority.

Separate preprints of this work were published in 1890 and presented by the author to his colleagues and friends in Russia and Europe. The work was then printed as "Simmetrija pravil'nykh sistem figur" in *Zapiski S. Petersburg Mineral. Obsc.*, 2nd series, 28 (1891), pp. 1-146.

REFERENCES: BL: [no copy listed]. • DSB: 5, 210-4 [by A. Menailov]. • Grigorev & Shafranovskii, *Russkie Mineralogi*, 1949: pp. 136-61. • Krüger, P., "Evgraf Stepanovič Fedorov (1853-1919)," (pp. 63-77) in: Guntau, M., ed., *Biographien bedeutender Geowissenschaftler der Sowjetunion: 19 biographischer Darstellung zu bedeutenden Gelehrten der russian sowjet. Geologiegeschichte*. Berlin, Akademie-Verlag, 1979. [Published as: *Schriftenreihe für geologische Wissenschaften, Berlin*, 14 (1979)]. • Senechal, *History of Geometrical Crystallography*, 1990: p. 48. • Shafranovskii, I.I. and N.V. Belov, "In Memoriam: E.S. Fedorov," (pp. 341-50) in: Ewald, P.P., et al., ed., *Fifty years of X-ray diffraction*. Utrecht, International Union of Crystallographers, 1962.

1787. — Russian, 1897.

Kurs kristallogafii. Kratkoe rukovodstvo po kristallografii ... 1897.

8°: xvi, 375 p., illus. VERY SCARCE.

1788. — German, 1920 [German transl.].

Das krystallreich. Tabellen zur krystallochemischen analyse. Von E. von Fedorov, unter mitwirkung von D. Artemiev ... Th. Barker, B. Orelkin und W. Sokolov ... Petrograd, 1920.

[Text] 4°: [4], lxxiv, 1050 p. [Atlas] 4°: [4] p., 213 plates.

VERY SCARCE. This is a German translation of the enormous "Tsarstvo Kristallov" ("The Crystal Kingdom") that appeared in *Zapiski Rossiiskoi Akademii Nauk*, 36 (1920). It was the culmination of Fyodorov's forty years of research in crystallography. Fyodorov and his favorite students collected enormous quantities of data from the measurements of all possible crystals. This information was categorizeed and published a year after Fyodorov's death in this monumental work. From the geometry of the crystals, the author derives conclusions about their internal structure., an idea taken up by Harker, Donnay, and others in the following decades.

REFERENCES: BL: [Ac.1125/3]. • Boldirew, A.K., *Kommentarii k rabote E.S. Fedorova: Das krystallreich*. Leningrad, Acad. des sci., 1926. 72 p., tab. • Grigorev & Shafranovskii, *Russkie Mineralogi*, 1949: pp. 136-61.

GABINETTO MINERALOGICO.

Gabinetto Mineralogico Dell Collegio Nazereno Descritto (2 vols., Roma, 1791-2).

See: Petrini, Giovanni Vincenzo.

GADD, Pehr Adrian. (BORN: Birkala Parish, Finland, 12 April 1727; DIED: Åbo, Sweden, 11 August 1797) *Swedish chemist & mineralogist.*

Gadd was educated at the University of Åbo, graduating with a philosophical degree. In 1750, he was appointed a docent in natural history. With the support of University and public funds, he undertook travels in 1753 to 1755 throughout Finland to study nature and economics. Upon his return Gadd was appointed professor of physics, economics and chemistry at the University of Åbo. In this capacity, he showed his skill as an operative chemist, knowledge which he passed on to his many students. Gadd was a member of the Kungliga Svenska Vetenskapademi (Royal Swedish Academy of Science), and other learned societies.

REFERENCES: *Biographiskt Lexicon*. • Ersch & Gruber, *Allgemeine Enzyklopädie*, 1818-89. • *Finsk Biografisk Handbok*: 1, cols. 720-2. • Hjelt, *Naturalhistoriens Studium*, 1896. • Hultin, A., "Pehr Adrian Gadd. Till tvåhundraårsminnet av hans födelse," *Finsk Tidskrift*, 102 (1927), 366-77. • Laitakari, *Geologische Bibliographie Finnlands*, 1934: 53-6. • *Nouvelle Biographie Générale* (Hofer). • *Oma Maa*, 1907-12: 4, 605-9 [by E.I. Hjelt]. • Poggendorff: 1, col. 826. • SBA: *Scandinavian Biographical Archive*: B-086, 130-153. • *Svenskt Biografiskt Handlexikon*: 1, 376. • *Svenskt Biografiskt Lexikon*: 16, 698. • Tigerstedt, R. "Kemins studium vid Åbo universitet," *Skrifter utgivna av Svenska Litteratursällskapet i Finland*, 42 (1899), 210 p. • WBI.

1789. — Swedish, 1787.

Inledning | Til | Sten=Rikets | Känning, | Efter samlade rön och an- | märkningar, | Academiske Ungdomen | Til Tjenst, | Författad och utgifwen | Af | Pehr Adr. Gadd, | [8 lines of titles and memberships] | [double rule] | Åbo, | Tryckt i



INLEDNING TIL STEN-RIKETS, 1787

Frencckellska Boktryckeriet | År 1787, på egen bekostnad.

8°: [1]-146, [2] p.

VERY RARE. Gadd's introduction to the science of mineralogy, containing many good observations on Swedish minerals.

REFERENCES: *Allgemeine Literatur-Zeitung*: 1790, I, p. 333. • *Beckmann P.O.B.*: 15 (1787), 232. • BL: [B.243.(1.)]. • *Gatterer, Mineralogischen Literatur*, 1798-9: 1, 48. • LKG: XII 116 & XVI 15. • NUC: [no copy listed].

Dissertations

1790. Dissertation, 1759: *Chemisk och Oeconomisk Afhandling om Bränne-torf under ...* P.A. Gadd's inseende ... Respondent Jacob Foenander. Åbo, [1759].

4°: [8], 18 p.

VERY SCARCE. Dissertation — Jacob Foenander [1731-1807], respondent.

Jacob Foenander. (BORN: 1731; DIED: 1807) *Swedish.*

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REFERENCES: BL: [B.234.(11.)]. • LKG: XVI 440. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1062. (Foenander)

1791. Dissertation, 1766: D.D. | *Dissertation Chemica*, | De | *Exhalationibus Mineralium*, | Quam | Venia Amplissimæ Facult. Philos. Academiæ Auraicæ, | Sub Præsidio | Amplissimi atque Celeberrimi Domini, | Mag. Petri Adriani | Gadd, | [...2 lines of titles and memberships...] | Modeste eruditorum examini submittit | Carolus Nicol. Hellenius, | Amanuensis in Laboratorio Chemico. | Tavastia-Fenno. | In Audit. Majori Die XX. Dec. A. MDCCLXVI. | H.A.M.S. | [rule] | Aboæ, | Impressit Joh. C. Frencckell.

4°: [4], 23, [1] p.

VERY SCARCE. Dissertation — Carl Nicolas Hellenius [1701-1768], respondent. The "Brakengeruch" of the sea and the resulting sea sickness that results from it, Gadd attributes to the salty exhalations of the sea, which are not however of alkaline nature. The suffocating vapor (Mephitis) he considers as vitrolis, and believes that it also gives an arsenical scent, if a small amount of arsenic is present. There follows descriptions of sulfur-like and petroleum-like vapors. These last, Gadd believes are responsible for fire, though he notices a sulfur smell from the combustion fumes of petroleum.

Carl Nicolas Hellenius. (BORN: 1701; DIED: 1768)

Swedish.

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REFERENCES: *Berlinische Sammlungen*: 3, 621. • BL: [B.371.(3.)]. • *Göttingische gelehrte Anzeigen*: 288. • LKG: IX 7. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1088. (Hellenius) *Finsk Biografiskt Handbok*. • SBA: Scandinavian Biographical Archive: I B-113, 366-377. • *Svenskt Biografiskt Handlexikon*: 1, 484. • *Svenskt Biografiskt Lexikon*. • WBI.

1792. Dissertation, 1767: D.D. | *Dissertatio Academica*, | *Indicia Mineralogiæ Fennicæ*, | Ab Ortu Christianismi | Ad Jacta | *Fundamenta Academiæ Aboensis* | *Delineans*, | Quam | Consensu Ampliss. Senat. Phil. in Reg. Acad. Aboënsi, | Præside, | Viro Amplissimo atque Celeberrimo | Dn. Petro Adriano | Gadd, | Direct. Oeconom. Reg. Chem. Profess. Ord. | Reg. Acad. Scient. Membr. | Publicoi Examini submittit | Regius Stipendiarius | Daniel Hirn, | Wiburgensis. | in Audit. Maj. d. XXVIII. Nov. Anni MDCCLXVII. | H.A.M.S. | [rule] | Aboæ, Impressit in Typographia ad Regiam Academiam.

4°: [4], 12 p.

VERY SCARCE. Dissertation — Daniel Hirn [1744-1822], respondent.

Daniel Hirn. (BORN: 1744; DIED: 1822) *Swedish theologian.*

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REFERENCES: BL: [B.396.(2.)]. • LKG: I 3. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1091. • Ward & Carozzi, *Geology Emerging*, 1984: no. 877. (Hirn) SBA: Scandinavian Biographical Archive: I B-118, 269-270. • WBI.

1793. Dissertation, 1767: *Dissertatio Academica*, | *Indicia Mineralogiæ* | In Fennia | Sub Gentilismo | *Delineans*, | Quam | Consens. Ampliss. Philos. Ordine in Reg. ad Auram Acad. | Præside | Viro Amplissimo atque Celeberrimo | Dn. Petro Adriano | Gadd, | Direct. Oeconom. Reg. Chem. Profess. Ord. | Reg. Acad. Scient. Membr. | Nec non Facult. Philos. h.t. Decano. | Ad diem III. Junii Ann. MDCCLXVII. in Audit. Sup. | H.A.M.S. | Publicæ disquisitioni modeste submittit | Carolus Robertus Giers, | Satacunda-Fenno. | [rule] | Aboæ | Impressit Joh. Christoph. Frencckell.

4°: [2], [1]-14 p.

CONTENTS: [2] pgs], Title page, verso blank.; [1]-14, Text.

VERY SCARCE. Dissertation — Carl Robert Giers [1741-1791], respondent.

Carl Robert Giers. (BORN: 1741; DIED: 1791) *Swedish.*

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REFERENCES: BL: [B.396.(1.)]. • LKG: I 4. • NUC: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1089. (Giers)

1794. Dissertation, 1767: J.G.N. | *Anledning*, | At Til | *Finska Mineral Historiens* | Upkomst, | Rätt Kunna | Känna och Pröva | Jordarter. | [...4 lines of titles and memberships...] | Herr Pehr Adrian | Gadd's | Inseende,

GADD

| Utigisne och Förfvarade | af | Salomon Savenius | Tav:st Fiance, | I Åbo Academiens Öfre Lårosal på vanlig tid | Eftermiddagen d. 5. December 1767. | [rule] | Åbo, Tryckt i Kongl. Academiæ Bektryckeriet.

4^o: [2], [1]-22 p.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-22, Text.

VERY SCARCE. Dissertation — Salomon Savenius [†1811], respondent.

Salomon Savenius. (BORN: c1741; DIED: 1811) *Swedish physician.*

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[BIOGRAPHY NEEDED]
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REFERENCES: BL: [B.229.(2.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 92. • LKG: XIV 795. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1092. (Savenius) SBA: Scandinavian Biographical Archive: I B-283, 041-042. • WBI.

1795. Dissertation, 1768: Specimen Geurgiae Fennicae. Respondent Jacob Malleen. Aboae, Impressit J.C. Frenckell, 1768.

4^o: [2], 30 p.

VERY SCARCE. Dissertation — Jacob Malleen [1745-1816], respondent. Describes a classification scheme for earths, stones, and minerals.

Jacob Malleen. (BORN: 1745; DIED: 1816) *Swedish.*

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[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1093. • Ward & Carozzi, *Geology Emerging*, 1984: no. 876. (Malleen)

1796. Dissertation, 1768: M.G.H. | Mineralogisk Afhandling, | Om | Finska | SielffrÅtsten, | [rule] | Med Wederbörandes samtycke, | Vid Kongl. Lårosådet i Åbo, | Under | Nuvarande Rectoris Magnifici, | Plantage Directeurs, Chemie Professorens, samt | Ledamotens af Kongl. Svenska Vet. Academiens, | Herr Pehr Adrian | Gadds | Inseende, | För Lager-Krantsen, | Utigisven och Försvatad | Uti Academiens Öfre Lårosal, | Den 20. December 1768. | af | Joseph Moliis, | Osterbothninge | [rule] | Åbo, Tryckt hos Joh. C. Frenckell.

4^o: [4], [1]-18 p.

VERY SCARCE. Dissertation — Joseph Moliis [1747-1822], respondent.

Joseph Moliis. (BORN: 1747; DIED: 1822) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.379.(15.)]. • LKG: XIII 117. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1095. (Moliis)

1797. Dissertation, 1768: Upgifter i Lithologien at rätt kunna känna och pröfva kalkaktige Stenarter. Respondent Gabriel G[abrielis] Aspegren. Åbo, 1768.

4^o: [4], 25, [1] p.

VERY SCARCE. Dissertation — Gabriel Aspegren [1708-1784], respondent.

Gabriel Aspegren. (BORN: 1708; DIED: 1784) *Finnish educator.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.397.(3.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 30. • Göttingische gelehrte Anzeigen: 1770, p. 1151. • LKG: XVI 308. • NUC: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1094. (Aspegren) *Finsk Grafisk Handbok.* • SBA: Scandinavian Biographical Archive: I B-014, 358-363. • WBI.

1798. Dissertation, 1769: Observationes Chemico-Physicae de Originaria Corporum Mineralium Electricitate. Respondent Benedictus Jac[obus] Ignatius. Aboae, 1769.

4^o: 14 p.

VERY SCARCE. Dissertation — Benedictus Jacobus Ignatius 1746-1803], respondent. Concerns the origin of electricity in mineral bodies.

Benedictus Jacobus Ignatius. (BORN: 1746; DIED: 1803) *Finnish dean.*

[
[BIOGRAPHY NEEDED]
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REFERENCES: BL: • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 290. • LKG: X 2 & XIV 796a. • NUC: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1098. (Ignatius) SBA: Scandinavian Biographical Archive: I B-133, 233-234. • WBI.

1799. Dissertation, 1769: D.A.G. | Observationes | Mineralogico | Metallurgicae | De | Monte Cuprifero | Tilas Wuori | Quas | Suffragio Amplissimi Ordinis Philosophici in Illustri ad | Auram Fennorum Atheneo | Præsiede Viro amplissimo atque Celeberrimo | Dn. Mag. Petro | Adriano Gadd. | [...4 lines of titles and memberships...] | Pro Gradu | Publico Examine submittit | Stipendarius Regius | Jacob Malleen. Filius. | Tavastia Flenno | Horis Ante Meridicin Soltis | In Auditorio Majori Die XIX. Junii Anni MDCCCLXIX. | [rule] | Aboæ, Impressit Joh. Christoph. Frenckell.

4^o: 12 p.

VERY SCARCE. Dissertation — Jacob Malleen [1745-1816], respondent.

Jacob Malleen. (BORN: 1745; DIED: 1816) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.229.(6.)]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1099. (Malleen)

1800. Dissertation, 1772: Försök til en Chemisk och Metallurgisk Afhandling om Tennets och dess Malmers Beskaffenhet under Inseende af Pehr Adrian Gadd ... den 6 julii ... ar 1772, af August Nordenskiöld. Stockholm & Åbo, Tryckt hos Carlbohm och Frenckell, [1772].

4^o: 46 p. At head of title: I.J.N.

VERY SCARCE. Dissertation — August Nordenskiöld [1754-1792], respondent. Concerns tin, its ores and mining and metallurgical methods.

August Nordenskiöld. (BORN: 1754; DIED: 1792) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.231.(10.)]. • Kress *Catalogue*: no. 10859.3-1 suppl. • LKG: XVI 454. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1122. (Nordenskiöld) *Finsk Grafisk Handbok.* • SBA: Scandinavian Biographical Archive: I B-219, 208-228. • Svenskt Biografiskt Lexikon. • WBI.

1801. Dissertation, 1774: Dissertation Gradualis, Indicia Palingenesiæ chemicæ in Regno Minerali Continens. Respondent Johannes Arenius. Åbo, 1774.

4^o: 14 p.

VERY SCARCE. Dissertation — Johannes Arenius [1749-1817], respondent.

Johannes Arenius. (BORN: 1749; DIED: 1817) *Finnish theologian.*

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[BIOGRAPHY NEEDED]
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REFERENCES: Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1125. (Arenius) SBA: Scandinavian Biographical Archive: I B-012, 314. • WBI.

1802. Dissertation, 1775: M.G.H. | Anmärkningar | Mineralogiske och Oeconomiske | Om | Demanters | Rätta Art Och Beskaffenhet. | [rule] | Med Philosoph. Facult. samtycke vid | Kongl. Akademien i Åbo. | Under Herr Pehr Adrian | Gadds | [...3 lines of titles and memberships...] | Utgifne och Försvarade | Af | Friedrich Dickman | V.D.M. | Åbo Acad. Öfre Laro-Sal den 3 Maji 1775. | [rule] | Åbo, | Tryckt hos Johan Christopher Frenckell.
4°: A⁴ B⁵; 9 $\frac{1}{2}$.; 18 p.

VERY SCARCE. Dissertation — Friedrich Dickman [1750-1817], respondent. Concerns diamonds and the diamond trade.

Friedrich Dickman. (BORN: 1750; DIED: 1817) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.229.(10.)]. • *Kress Catalogue*: no. 11249.2-0 suppl. • LKG: XVI 235. • Sinkankas, *Gemology Bibliography*, 1993: no. 1696. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1127. (**Dickman**)

1803. Dissertation, 1776: Academisk afhandling om Finska Jaspis-arter och Agater. Respondent Alexander Ramstadius. Åbo, Tryckt hos Johan Christopher Frenckell, 1776.
4°: 18 p.

VERY SCARCE. Dissertation — Alexander Ramstadius [1752-1805], respondent.

Alexander Ramstadius. (BORN: 1752; DIED: 1817) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.397.(10.)]. • LKG: XVI 295. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1129. (**Ramstadius**)

1804. Dissertation, 1780: Chemisk Undersökning, om kalla Artificiella Mineral-Vattens Tilredning och nytta. Åbo, Tryckt hos Kongl. Acad. Boktr. J.C. Frenckells Enka, 1780.
4°: [4], 27, [1] p.

VERY SCARCE. Dissertation — Johan Lorents Westberg [1759-1846], respondent.

Johan Lorents Westberg. (BORN: 1759; DIED: 1846) *Swedish.*

REFERENCES: BL: [B.729.(15.)]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1136. (**Westberg**) No references found.

1805. Dissertation, 1788: M.G.H. | Inledning | Til | Österbotns | Mineral-Historia, | Med | Philosophiske Facultetens Bifall | [...5 lines of titles and memberships...] | Herr Pehr Adrian Gadds | Tilsyn utarbetad, | Och | Til allmänt omspröfvande utigven | Af | Carl Kreander, | Kongl. Stipendiär. Den 6 Dec. f.m. på Kgl. Åbo Academiens Idro-Sal, år 1788. | [rule] | Åbo, Tryckt i Frenckellfka Boktryckeriet.
4°: [2], 18 p.

VERY SCARCE. Dissertation — Carl Kreander [1766-1795], respondent. An introduction to the mineral history of the province of Ostbothnien.

Carl Kreander. (BORN: 1766; DIED: 1795) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.372.(5.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 170. • *Gothäische gelehrte Zeitungen*: 1792, p. 234. • LKG: XIV 797b. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1145. (**Kreander**)

1806. Dissertation, 1788: Inledning, at efter Finska Bergens Art och Läge Samt Stenarternes Beskaffenhet, upsöka nyttiga Mineralier. I. Respondent Lars Georg Rabenius. Åbo, 1788.

[CONTINUED AS:]

Inledning ... II. Respondent Magnus Jacob Nordenswan. Åbo, 1788.

2 parts. 4°: 1-16 p.; 17-34 p.

VERY SCARCE. Dissertations — (I) Lars Georg Rabenius [1771-1846], respondent; (II) Magnus Jacob Nordenswan [1770-1806], respondent. An introduction to mining and prospecting??

Magnus Jacob Nordenswan. (BORN: 1770; DIED: 1806)

Swedish.
[
[BIOGRAPHY NEEDED]
]

Lars Georg Rabenius. (BORN: 1771; DIED: 1846)

Swedish.
[
[BIOGRAPHY NEEDED]
]

REFERENCES: Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: nos. 1143 & 1144. (**Nordenswan**) (**Rabenius**)

1807. Dissertation, 1789: M.G.H. | Inledning | Til | Tavastlands | Mineral-Historia, | Forra Delen [-Sednare Delen] | [...7 lines of titles and memberships...] | Herr Pehr Adrian Gadds | Inseende, | För Lagerkrantsen | Utgifven och Försvarad | Af | Martin Lilius, | Satacundensis. | Vid Kongl. Akademien i Åbo den [20] Maji 1789. | [rule] | Tryckt i Frenckellska Boktryckeriet.

[CONTINUED AS:]

Inledning ... II. Respondent Abraham Lilius ... Åbo, 1789.
2 parts. 4°: [4], 1-20 p.; [2], 21-30 p.

VERY SCARCE. Dissertations — (I) Martin Lilius [1763-1809], respondent; (II) Abraham Lilius [1761-1848], respondent.

Martin Lilius. (BORN: 1763; DIED: 1809) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

Abraham Lilius. (BORN: 1761; DIED: 1848) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

REFERENCES: BL: [B.372.(6.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 170. • *Gothäische gelehrte Zeitungen*: 1792, p. 235. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: nos. 1146 & 1147. (**Lilius**) (**Lilius**)

1808. Dissertation, 1789-92: M.G.H. | Inledning | Til | Björneborgs Läns | Mineral-Historia, | Förre Delen | [...7 lines of titles and memberships...] | Herr Pehr Adrian Gadds | Inseende, | Utarbetad och til allmän granskning utgifven | Af | Philos. Cand. | Carl Gustaf Sanmark, | Satacunda-Bo, | Åbo Acad. Öfre Lårosal eft. mid. [...unreadable text...] 1789. | [rule] | Tryckt i Frenckellska Boktryckeriet.

[CONTINUED AS:]

Inledning ... II. Respondent Nils Christian Sanmark. Åbo, 1792.

[CONTINUED AS:]

Inledning ... III. Respondent Berndt Johan Gadd. Åbo, 1792.

3 parts. 4°: [2], 1-24 p.; [4], 25-53 (i.e., 43) p.; [2], 45-66 p.

VERY SCARCE. Dissertations — (I) Carl Gustaf Sanmark [1766-1823], respondent; (II) Nils Christian Sanmark [1769-1839], respondent; (III) Berndt Johan Gadd [1768-1829], respondent.

Berndt Johan Gadd. (BORN: 1768; DIED: 1829) *Finnish chaplain.*

[
[BIOGRAPHY NEEDED]
]

Nils Christian Sanmark. (BORN: 1769; DIED: 1839) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

Carl Gustaf Sanmark. (BORN: 1766; DIED: 1823) *Swedish.*

[
[BIOGRAPHY NEEDED]
]

GADOLIN

[BIOGRAPHY NEEDED]

REFERENCES: BL: [B.372.(8.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 170. • *Gothäische gelehrte Zeitungen*: 1792, p. 235 [part I]. • LKG: XIV 799d & XIV 800e. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: nos. 1151, 1152 & 1153. (Gadd) SBA: Scandinavian Biographical Archive: I B-086, 036-037. • WBI. (Sanmark) (Sanmark)

1809. Dissertation, 1792: Dissertatio om Hollola Socken uti Tavastland. Respondent Johan Fredrich Bucht. Åbo, 1792. 4°: [4], 31, [1] p.

VERY SCARCE. Dissertation — Johan Fredrich Bucht [1770-1846], respondent.

Johan Fredrich Bucht. (BORN: 1770; DIED: 1846) *Swedish.*

[BIOGRAPHY NEEDED]

REFERENCES: BL. • LKG: XIV 801f. • NUC: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1154. (Bucht)

1810. Dissertation, 1795: Inledning til Mineral-Historien öfver Åbo läns södra del. Respondent Jacob Gummerus. Åbo, Tryckt i Frenkellfka Boktryckeriet, 1795. 4°: [2], 25 p.

VERY SCARCE. Dissertation — Jacob Gummerus [1771-1843], respondent. A scholarly study of the mineral and mines of Abolehn in Finland.

Jacob Gummerus. (BORN: 1771; DIED: 1843) *Swedish.*

[BIOGRAPHY NEEDED]

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 92. • *Göttingische gelehrte Anzeigen*: April, 1796, p. 663. • LKG: XIV 809. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1159. (Gummerus)

1811. Dissertation, 1795: Inledning til Mineral – Historien öfver Åbo Läns Norra Del – og – Saedra Del. Respondent Johan Fredrik Glasberg. Åbo, Tryckt i Frenkellfka Boktryckeriet, 1795. 4°: [4], 14 p.

VERY SCARCE. Dissertation — Johan Fredrik Glasberg [1770-1809], respondent.

Johan Fredrik Glasberg. (BORN: 1770; DIED: 1809) *Swedish.*

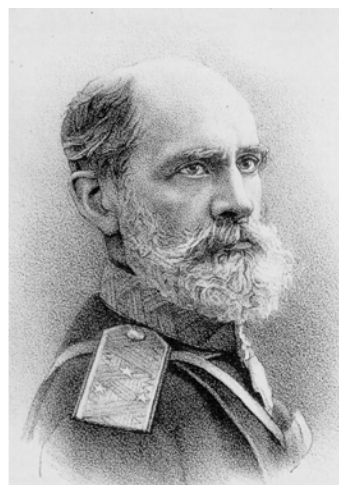
[BIOGRAPHY NEEDED]

REFERENCES: BL. • LKG: XIV 802g. • NUC: [no copy listed]. • Vallinkoski, *Turun Akatemian Vaitoskirjat*, 1962-9: no. 1158. (Glasberg)

GADOLIN, Aksel' Vil'gel'movich. (BORN: Finland, 12 (24) June 1828; DIED: St. Petersburg, Russia, 15 (27) December 1892) *Russian scientist & artillery weapons expert.*

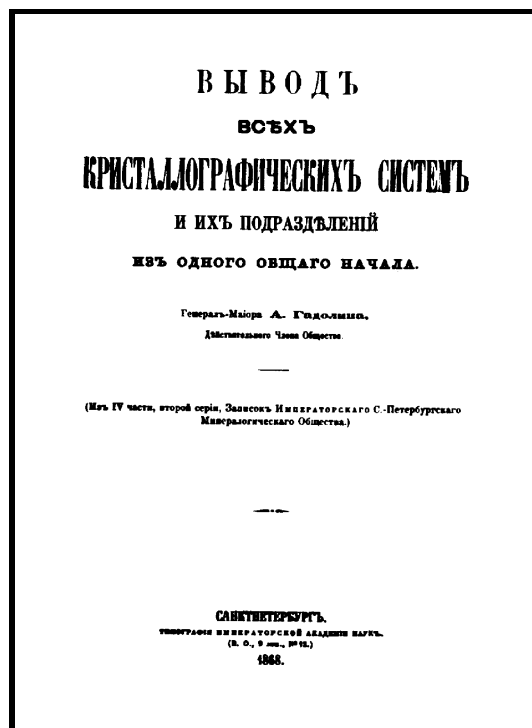
Gadolin graduated the Mikhail Artillery School in 1849 and remained there to teach. He developed techniques for building high velocity canons, which significantly increased the range a shell could be propelled. He is remembered in crystallography for deriving the 32 macrosymmetrical crystal groups, and devising a method for depicting these groups on a sphere that is still in use to the present. The St. Petersburg Academy of Sciences awarded him the Lomonosov prize for his crystallographic work, 1868.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 93. • *Finsk Biografisk Handbok*: 1, cols. 729-32. • Gadolin, C.A.J., "Axel Gadolin 1828-1892 och hans finländska bakgrund," *Historiska och Litteraturhistoriska Studier (SLS)*. 42 (Helsingfors 1967), pp. 94-168. • *Great Soviet Encyclopedia*: 5, 162. • Laitakari, *Geologische Bibliographie Finnlands*, 1934: 56-7. • Larman, E.K., A.B.



GADOLIN

Гадолин [A.V. Gadolin]. Moscow, 1969. 78 p., plate, illus., portraits, biblio. (pp. 74-[79]). • Moliavko, *Geologicheskii*, 1985: p. 71. • Öma Maa, 1907-12. • Poggendorff: 3, 488 & 4, 473. • Sarjeant, *Geologists*, 1980: 2, 1056. • SBA: Scandinavian Biographical Archive: B-086, 248-259. • Shukhardin, S.V., "Aksel' Vilgel'movich Gadolin," *Liudi Russkoi Nauki*, Moscow, 1965. • WBI. • Zvorykin, *Biograficheskii Slovar*, 1958: 1, 198-9.



DEDUCTION, 1868

1812. — Russian, 1868 [First edition].
Вывод | Всех | Кристаллографических Систем

| И Их Подразделении | Из Одного Общего Начала. | ...

4°: 156 p.

EXTREMELY RARE. This is the separate appearance of Gadolin's *Deduction of all Crystallographic Systems and their Subdivisions by Means of a Single General Principle* that showed there are only a limited number of possible crystallographic polyhedra possible. In 1830 CARL FRIEDRICH NAUMANN coordinated the crystallographic systems of Weiss and Mohs, but which to some degree ignored symmetry elements. In response Gadolin who was a Russian artillery professor and a talented amateur crystallographer became agitated over Naumann's lack of rational in developing his crystallographic descriptions. To better relate symmetry and crystallography Gadolin developed his own procedure for studying crystal symmetry.

Beginning with the empirical law of rational parameters Gadolin demonstrates in this work that it is possible to derive through deduction all the crystallographically possible polyhedra by studying how the elements of symmetry can be combined. In this way Gadolin shows that the resulting polyhedra can be divided into 32 classes varying by symmetry. He also states unequivocally and for the first time that two crystals should belong to the same crystal class if they have the same elements of symmetry. This is the foundation of modern classification into geometric crystal classes.

Like some other scientific works this revolutionary work was largely overlooked at the time of its publication. It was only in later years that Gadolin's crystal classes became generally accepted and led to many significant theories and practical studies. Even today and to the consternation of many student geologists the Gadolin classification is to be found worked out in many mineralogical textbooks.

Reprinted, 1954: Вывод всех Кристаллографических Систем и их Подразделении из Одного Общего Начала [Vyvod vseh Kristallograficheskikh Sistem i ikh Podrazdelenii iz Odного Obshchego Nachala. Redaktsia i Primechaniia O.M. Ansheles, I.I. Shafranovskii, & V.A. Frank-Kamenetskogo.]. Leningrad, Akademiia Nauk SSSR, 1954. 155 p., portrait, diagrams. [DLC, QD911.G123].

REFERENCES: BL: [no copy listed]. • Burke, *Origins of the Science of Crystals*, 1966: [not mentioned]. • Groth, *Entwicklungsgeschichte*, 1926: pp. 110-1. • Hausen, *History of Mineralogy in Finland*, 1968: pp. 20-3. • NUC: [no copy listed]. • Senechal, *History of Geometrical Crystallography*, 1990: p. 47. • Shafranovskii, *Istoriia Kristallografii XIX Vek*, 1980: pp. 125-35, portrait.

1813. Translation, 1896: Abhandlung über die Herleitung aller krystallographischer Systeme, mit ihren Unterabtheilungen aus einem einzigen Prinzipie von Axel Gadolin. (Gelesen den 19. März 1867) von Axel Gadolin. (Gelesen den 19. März 1867) herausgegeben von P. Groth. Mit 26 Textfiguren und 3 Tafeln ... Leipzig, W. Engelmann, 1896.

8°: viii, 92 p., 3 plates, 26 text illus. Published as: *Ostwald's Klassiker der exakten Wissenschaften*, vol. 75.

SCARCE. Edited by PAUL GROTH, this is a German translation of Gadolin's famous crystallography. It is the first appearance in book form in a European language although it appeared after a French rendering that originally appeared in *Acta Societatis Scientiarum Fennicae, Helsingfors*, 9 (1871). This German edition was published as volume 75 of Ostwald's famous series of translations.

REFERENCES: BL: [8706.eee.1/75.]. • Roller & Goodman, *Catalogue*, 1976: 1, 431.



GADOLIN

GADOLIN, Johan. (BORN: Åbo near Helsingfors (Helsinki), Finland, 5 June 1760; DIED: Wirmo, Finland, 15 August 1852) *Finnish chemist.*

Son of astronomer and physicist Jacob Gadolin [1719-1802]. For a time, Johann was a student of BERGMAN at the University of Upsala. From 1786 to 1788, Johann traveled outland to complete his studies and broaden his knowledge. He became a docent at the University of Åbo in 1789, and following GADD's death, he was appointed professor of chemistry; a post he held until 1822. He specialized in the analysis of rare earth elements, and is credited with the discovery in 1794 of the element yttrium. Gadolin's mineral collection was destroyed in 1827 by fire when the Turku Academy burned down. Gadolin held membership in the Academy of Science in Stockholm. The mineral "Gadolinite" was named in his honor by M.H. Klaproth in 1802.

REFERENCES: *Biographiskt Lexikon*. • DSB: 5, 215-6 [by S.J. Kopperl]. • *Finsk Biografisk Handbok*: 1, cols. 726-8. • Laitakari, *Geologische Bibliographie Finnlands*, 1934: 57-9. • Nordin-Pettersson, *Konstsamlingar*, 1971: 436. • Ojala, V. and E.R. Schierz, "Finnish chemists," *Journal of Chemical Education*, 14 (1937), 161-5. • Oma Maa, 1907-12: 4, 645-9 [by R. Tigerstedt]. • Poggendorff: 1, col. 827. • SBA: Scandinavian Biographical Archive: B-086, 322-344. • *Svenskt Biografiskt Handlexikon*: 1, 377. • *Svenskt Biografiskt Lexikon*: 16, 717. • Tigerstedt, R.A.A., *Johan Gadolin. Ett bidrag till de induktiva vetenskapernas historia in Finland*. Helsinki, 1877.. • WBI. • Weeks, *Discovery of the Elements*, 1934: 230-1, portrait. • Wilson, *History of Mineral Collecting*, 1994: 136 & 171.

Dissertatio chemica de Analyti Ferri ... Respondent Johannes Gadolin. (Upsala, 1781).

See: **Bergman, Torbern Olof.**

Dissertatio chemica de Analyti Ferri ... Respondent Johannes Gadolin. [Translated by Grignon.] (Paris, 1783).

See: **Bergman, Torbern Olof.**

1814. — Latin, 1823.

Index Fossilium Analysisibus Chemicis Examinato-

GALIANI

rum, ratione Ponderis, Capacitatis et Oxygenii Partium, Designatorum. Aboæ, 1823.

4°: 1-69 p.

RARE. Listing of the chemical examination of minerals, with respect to the proportion of oxygen they contain.

REFERENCES: Laitakari, *Geologische Bibliographie Finnlands*, 1934: 58-9.

1815. — Latin, 1827 [Dissertations].

Novus fossilium index | rationes ponderis, capacitatis | et | oxygenii partium constitutivarum ostendens, | cujus partem primam (secundam, tertiam ... decimam tertiam) | consensu amplissimæ facultatis philosophicæ | præsidæ | Mag. Johanne Gadolin | [...8 lines of titles and memberships...] | pro gradu philosophico | publico examini subicit | Carolus Vilhelmus Ramstedt [(name of defendant)] | stipend. publ. Ostrobothniensis. (local "affinity" of defendant) | In auditorio philos. Die XXV Maji MDCCCXXVII. (date of defence) | H.A.M.S. (H.P.M.S.; A.M.; P.M.) | [rule] | Aboæ | Typis Frenckellianis.

4°: $\pi^1 A^4 2\pi^1 B^4 3\pi^1 C^4 4\pi^1 D^4 5\pi^1 E^4 6\pi^1 F^4 7\pi^1 G^4 8\pi^1 H^4 9\pi^1 I^4 10\pi^1 K^4 11\pi^1 L^4 12\pi^1 M^4 13\pi^1 N^4$; 65ℓ.; [2], [1]-8, [2], 9-16, [2], 17-24, [2], 25-32, [2], 33-40, [2], 41-48, [2], 49-56, [2], 57-64, [2], 65-72, [2], 73-80, [2], 81-88, [2], 89-96, [2], 97-103, [1] p.

CONTENTS: [2 pgs], Title page, verso "Theses" (In all, 13 such leaves).; [1]-14, text.; 15-103, alphabetical mineral list.; [1 pg], blank.

RARE. Chemical "system" listing approximately 1500 minerals and compounds in alphabetic order. Presented in thirteen individual dissertations (C. V. Ramstedt, G. H. Schroderus, F. A. Borg, C. Kullman, S. E. Sjöman, O. U. Tulindberg, N. A. Lund, J. A. Holm, G. G. Riddelin, O. V. Mohell, G. V. Himberg, J. F. Lindberg, J. J. af Gadolin), each with a title-page of its own excluded from the collective pagination, the verso of each such title-page listing 5 theses to be defended. [Entry by Johan Kjellman]

REFERENCES: NUC. • SWIM.

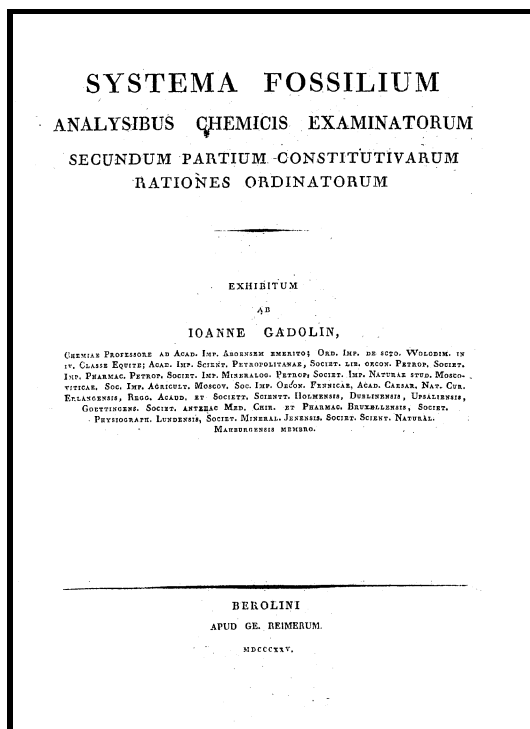
1816. — Latin, 1825.

Systema Fossilium | Analysibus Chemicis Examinatorum | Secundum Partium Constitutivarum | Rationes Ordinatorum | [tapered rule] | Exhibitum | Ab | Joanne Gadolin, | [...8 lines of titles and memberships...] | [tapered rule] | Berolini | Apud Ge. Reimerum. MDCCCXXV.

4°: π^1 1-304 312; 122ℓ.; [2], [1]-240, [2] p. PAGE SIZE: 248 x 204 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-10, "Systema Fossilium | secundum partium constitutivarum rationem ordinatorum." [=introduction].; 11-222, Text.; 223-240, "Index Synonymorum Citatorum."; [2 pgs], "Errata typographica."

SCARCE. Gadolin was a man of practical and technical applications. He viewed minerals as natural



SYSTEMA FOSSILIVM, 1825

chemical products, and consequently investigated through chemistry the minerals and rocks of his country. At that time, very little was known of mineral paragenesis, but thanks to the publications of HAÜY and BERZELIUS a new foundation in mineral chemistry was being laid. In the *Systema Fossilium*, Gadolin creates a system of mineral classification based upon chemical principles. The introduction explains the reasons and application of Gadolin's theories, while the text is a systematic ordering of mineral species by their chemistry. The volume concludes with an index of mineral synonyms.

REFERENCES: Hausen, *History of Mineralogy in Finland*, 1968: 14-15, 16, 21 & 33.

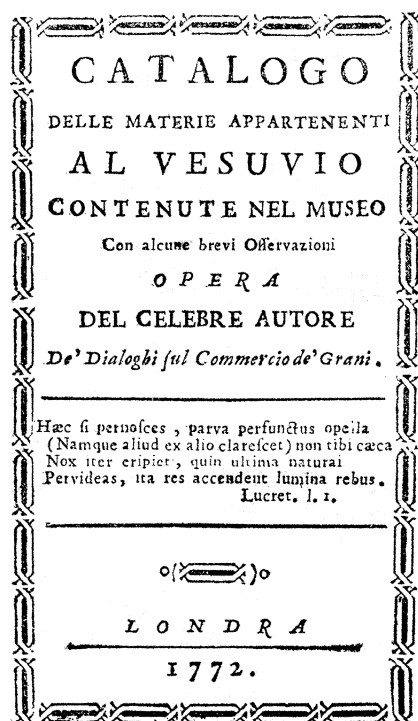
GALIANI, Ferdinando. (BORN: 1728; DIED: 1787) Italian economist.

Galiani wrote several works on natural history including in 1779 a book designed to calm the fears of Naples residents after an eruption of Vesuvius.

REFERENCES: ABI: I 447, 281-328; II 261, 92-187; II S 36, 201. • Benvenuti, *Dizionario degli Italiani all'Estero*, 1890. • Capparoni, *Profili Bio-Bibliografici*, 1928-32. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • Imperatori, *Dizionario di Italiani all'Estero*, 1956. • Mieli, *Gli Scienziati Italiani*, 1921. • *Nouvelle Biographie Générale* (Hoefer): 19, cols. 230-7. • WBI.

1817. — Italian, 1772 [Collection catalog].

[Contained within an ornate box:] Catalogo | Delle Materie Appartenenti | Al Vesuvio | Contenute Nel Museo | Con alcune brevi Osservazioni | Opera



CATALOGO, 1772

| Del Celebre Autore | De' Dialoghi sul Commercio de' Grani. | [rule] | [...4 lines of quotation in Latin, signed Lucret ...] | [rule] | [ornament] | Londra | [rule] | 1772.

8°: viii, 184 p.

RARE. This is the earliest account of the varied volcanic ejecta found at Vesuvius. It is a descriptive catalog of 141 specimens contained in a mineralogical cabinet, and provides observations on the different minerals and rocks, and a method of classification based upon the degree of calcination of the specimen. Contained at the end is a valuable early bibliography of writings on Vesuvius.

The catalog gives details of the earliest mineralogical cabinet to describe the various ejecta of Mount Vesuvius and, together with GIOVANNI MARIA DELLA TORRE's *Storia e Fenomeni del Vesuvio* (Napoli, 1755), provides the first ever descriptions of the volcano's minerals and rocks. It concludes with a 14 page bibliography of early works describing the volcano. In the history of mineralogy, Vesuvius is by far the most important volcano, as it alone was accessible to scientists in the eighteenth and nineteenth centuries. Thus, it was not only the source of rare and exceptionally beautiful minerals, but also facilitated the development of theories on mineral genesis. Later it was to become the birthplace of theoretical and practical vulcanology, when the world's first observatory was set up on the mountain's slopes in 1845.

REFERENCES: *Freilich Sale Catalog*: no. 195. •

Furchheim, *Bibliografia del Vesuvio*, 1897: p. 61. • Jonathan Hill, Bookseller: cat. 108 (1997), no. 40. • LKG: XIV 603. • NUC: [no copy listed].



GALISSARD DE MARIGNAC

GALISSARD DE MARIGNAC, Jean-Charles. (BORN: 24 April 1817; DIED: 15 April 1894) *French mineralogist & chemist.*

Jean-Charles Galissard de Marignac from Geneva, was a pupil of Liebig. It was in Liebig's Giessen laboratory that de Marignac did his only researches on organic chemistry, on naphthalene and phthalic acid. He then changed to anorganic chemistry and commenced his career as professor of chemistry first at the Academy of Geneva, which was later to be made into the University.

1818. — French, 1855.

Recherches sur la formes crystallines de quelques composés chimiques. Genève, 1855.

8°:

VERY SCARCE. First edition. Concerns the forms of crystals grown in the laboratory. Rammelsberg in his 1857 supplement to his *Krystallographische Chemie* makes frequent reference to this work.

1819. — French, 1902 [Collected works].

Oeuvres complètes. Publiées hors série sous les auspices de la Société de Physique et Histoire Naturelle de Genève par E. Ador. Genève, Paris & Berlin, (1902).

2 vols. [VOL 1] 4°: 8, lvi, 701 p. [VOL 2] 4°: 4, 839 p. With a fine portrait and numerous plates and folding tables.

RARE. REWORK COMMENTARY. Edited by Emile Ador [1845-]. In 1878 Marignac was able to show that the rare earth known as erbia, obtained from gadolinite, could be decomposed into two oxides, one for which the name erbia was retained and a second which was called ytterbia. His most important work, however, consisted in the determination of the atomic weights of numerous elements, and in other subjects of inorganic chemistry. These two volumes

GATTERER

contain his numerous papers on inorganic chemistry and crystallography. In his most important, he showed that fluostannates and fluosilicates are isomorphous, thus establishing the formula of silica as SiO₂ and not SiO₃, and this produced a revolution in chemical mineralogy.

His 111 published papers were handsomely reprinted as *Oeuvres complètes* with portrait and a complete list of Marignacs atomic weights. When, in 1860, Stas dismissed Prout's law as an "illusion", Marignac cautioned that deviations from the law of definite proportions might sometimes occur — a possibility suggested by an erroneous view of the composition of acids which he then held. More speculatively, he suggested that Prout's law might be an "Ideal" law which was subject to perturbing influences such that the weights of the subatomic particles of the primordial matter did not add up to exactly the experimentally determined atomic weights. This daring speculation was revived in 1915 by W. D. Harkins and E. D. Wilson and from it the concept of the packing fraction was developed by F. W. Aston in 1920.

REFERENCES: DSB: 9, 109. • Findlay, Alexander., *A hundred years of chemistry*. London, G. Duckworth, 1937. 352 p., diagrams: p. 190. • Partington, *History of Chemistry*, 1961-70: 4, 875.

GALLITZIN, Dmitrii Aleksyeevich.

See: Golitsyn (gallitzin), Dmitrii Aleksyevich.

GALVANI, Camillo.

1820. — Italian, 1780.

Della Pietra | Fosforica | Bolognese.

8°: A-E⁸ F⁶; 46ℓ.; [1]-91, [1] p., [3] folded leaves of plates showing 11 figures. Imprint from colophon (p. [92]): "In Bologna MDCCLXXX. | [ornate rule] | Nella Stamperia del Longhi. | Con Licenza de' Superiori."

CONTENTS: [1-2], Title page, verso blank.; 3-6, Dedication, dated 23 October 1780.; 7-10, "Prefazione."; 11-89, Text (divided into 13 chapters); 90-91, "Indice." [=table of contents]; [1 pg], Colophon.

VERY SCARCE. "In the chapters of this ninety-one page book, the history, color, shape, internal structure, and analysis, etc., of the Bolognian stone are described in considerable detail, and a comparison made with other phosphors. Beccari and his co-workers are particularly referred to and ten pages of experiments reported. Galvani ended with various reflections on the subjects presented. On the whole the book is a good résumé of contemporary knowledge." (Harvey).

REFERENCES: BL: [659.c.12.(3.)]. • Harvey, *History of Luminescence*, 1957: p. 333. • Jonathan Hill, Bookseller: cat. 133 (2000), no. 53. • Roller & Goodman, *Catalogue*, 1976: 1, 441.

GASSMANN, Franz.

1821. — Latin, 1676.

Bifolium Metallicum seu, Medicina duplex, pro Metallis & Hominibus Infirmis, à Proceribus Artis Hermeticæ, sub Titulo Lapidis Philosophici ... à Pantaleone [i.e., Franz Gassmann]. Noribergæ, apud P. Fürstii, 1676.

8°: 55 p. VERY SCARCE.

REFERENCES: Bolton, *Bibliography of Chemistry*, 1893: p. 1037. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 453. • Hoover Collection: no. 334. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: p. 99. • Thorndike, *History of Magic*, 1923-58: 8, p. 378.

GATTERER, Christoph Wilhelm Jacob. (BORN: Göttingen, Germany, 2 December 1759; DIED: Heidelberg, Germany, 11 September 1838) *German mineralogist, naturalist & bibliographer*.

Son of the great German historian, Johann Christoph Gatterer [1727-1799]. Christoph studied mineralogy and natural science at Göttingen, receiving his advanced degree in 1778. He then accepted a position as professor of "Kameral"-science and technology at the University of Heidelberg in 1787. In 1795, he entered the diplomatic corp.

REFERENCES: ADB: 8, 409-10. • DBA: I 370, 303-323; II 429, 386-387. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • *Neuer Nekrolog der Deutschen*: Jahrg. 1838 (1840), 1142-4. • Poggendorff: 1, col. 850. • Wagenitz, *Göttinger Biologen*, 1988: 63. • WBI.

1822. — German, 1785-94.

Anleitung den Harz und andere Bergwerke mit nuzzen zu bereisen. Göttingen, im Verlag der Wittwe Bandenhoeck, 1785-94.

5 vols. [VOL 1: 1785] 8°: x, [6], 366, 26 p. [VOL 2: 1786] 8°: [18], 314, [46] p. [VOL 3: 1790] 8°: [VOL 4: 1793] 8°: [VOL 5: 1794] 8°:

RARE. This five volume series is an early and important account of the Harz Mountains of Germany emphasizing the natural history of the region. Mining had occurred in the Harz since at least the 10th century and these volumes describe the mineral resources of the area including its copper, gold, silver and lead mines and the techniques for processing metals from their ores. Gatterer an instinctive bibliographer also provides extensive citations to other works regarding the Harz Mountains and mining in general. This work also contains much on the local animals and plants of the region. This appears to be a rare work especially in complete sets.

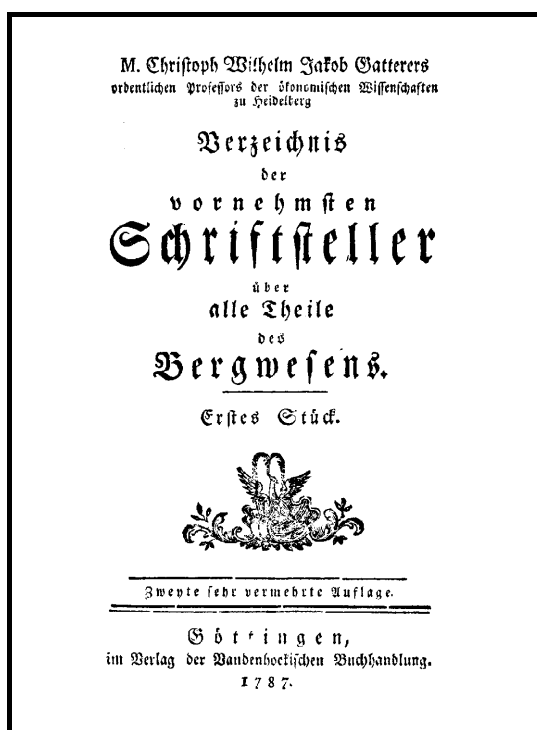
Contents: Vol 1: Berg- und Hüttenwesen allgemein. Vol 2: Flora, Fauna, Geologie, Klima der Region (with a Harz-Bibliography). Vol 3: Beiträge zur Geschichte des Harzes, das heißt von den unter- und oberharzischen Bergwerken. Vols 4-5: Beschreibung des Harzes.

REFERENCES: BL: [440.I.4.]. • Heinsius, *Allgemeines Bücher Lexicon*, 1812-49: 2, 19. • Hoover Collection: no. 336 [vols. 1-3]. • *Katalog Bergakademie Freiberg*, 1879: p. 221. • LKG: XIV 171. • NUC: 192, 411-2 [NG 0078312].

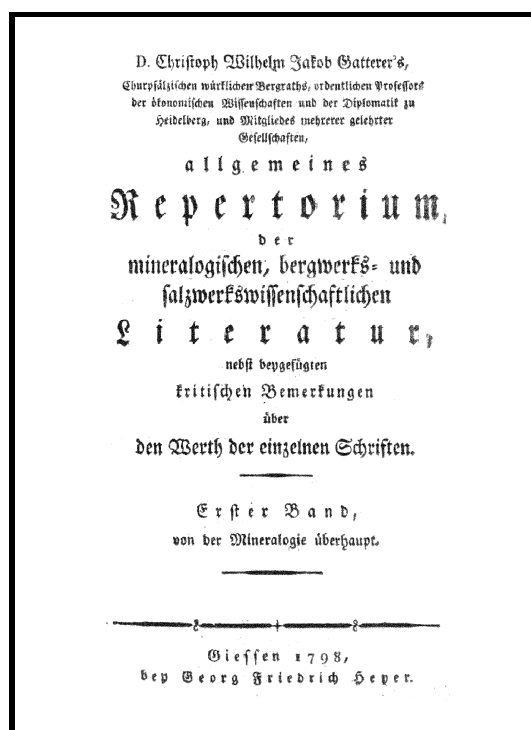
1823. — German, 1787.

M. Christoph Wilhelm Jakob Gatterers | [...2 lines of titles and memberships...] | Verzeichnis | der | vornehmsten | Schriftsteller über | alle Theile | des | Bergwesens. | [rule] | Erstes Stück. | [ornament] | [rule] | Zweyte sehr vermehrte Auflage. | [double rule] | Göttingen, | im Verlag der Vandenhoeckischen Buchhandlung. | 1787.

2 vols. [Vol 1: 1787] 8°: π² A-F⁸ G⁵; 55ℓ.; [4], [1]-96, [10] p. [Vol 2: 1786] 8°:)(³ A-E⁸ F⁹; 52ℓ.; [6],



VERZEICHNIS, 1787



ALLGEMEINES REPERTORIUM, 1798

[1]-98 p.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Inhalt."; [1]-96, Text.; [10 pgs], "Register."

[Vol 2] [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede."—dated 30 July 1786.; [2 pgs], "Inhalt."; [1]-98, Text.

RARE. The first portion is a general bibliography of mineralogy, mining, minting, and salt containing some minor biographical information. This part originally appeared in 1785 but was very much expanded and published again in 1787, and this is the more common issue. In the meantime, the second part focusing on the Harz region of Germany and its mining bibliography was published in 1786. However, this work was eclipsed by Gatterer's *Allgemeines Repertorium* that is described in the next entry.

Facsimile reprint, 1973: *Verzeichnis der vornehmsten Schriftsteller über alle Theile des Bergwesens*. Hildesheim, Verlag Dr. H.A. Gerstenberg, 1973. 2 parts bound in one volume. [4], [4], [1]-96, [10] p.; [6], [1]-98 p.

REFERENCES: BL: [965.h.10.; Stück one wanting]. • LKG: I 12. • NUC: 192, 411-2 [NG 0078315]. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 566.

1824. — German, 1798-9.

D. Christoph Wilhelm Jakob Gatterer's, | [...4 lines of titles and memberships...] | Allgemeines | Repertorium, | der | mineralogischen, bergwerks- und | salzwerkswissenschaftlichen | Literatur, | nebst beygefügten | kritischen Bemerkungen | über | den Werth der einzelnen Schriften. | [tapered rule] | Erster Band, | von der Mineralogie überhaupt.

| [tapered rule] | [ornate rule] | Giessen 1798, | bey Georg Friedrich Heyer.

[THE SERIES TITLE PAGE READS:]

D. Christoph Wilhelm Jakob Gatterer's, | [...4 lines of titles and memberships...] | Allgemeines | Repertorium, | der | mineralogischen | und | salzwerkswissenschaftlichen | Literatur, | nebst beygefügten | kritischen Bemerkungen | über | den Werth der einzelnen Schriften. | [tapered rule] | Erster Band, | von der Mineralogie überhaupt. | [tapered rule] | [ornate rule] | Giessen 1798, | bey Georg Friedrich Heyer.

2 vols. [Vol 1: 1798] 8°: π^8) (4 A-T⁸ U⁷; 171 ℓ .; [4], [i]-iv, [16], [1]-318 p., (page 291 misprinted 191); [Vol 2: 1799] 8°: π^3) (5 b³ A-Z⁸ 2A² a-k⁴ l²; 239 ℓ .; [22], [1]-371, [1] blank, [50] name index, [33] subject index, [1] errata p.

CONTENTS: [Vol 1] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [i]-iv, "Vorrede"—dated Heidelberg, 21 August 1798.; [1 pg], "Mineralogische Literatur. Erste Band, von der Mineralogie überhaupt."; [1 page], Blank.; [14 pgs], "Inhalt des ersten Theils der mineralogischen Literatur."; [1]-318, "Erste Theil, von der Mineralogie überhaupt."

[Vol 2] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1 pg], "Mineralogische Literatur. Zweyter Band, von den einzelnen Mineralien und Salzwerken insbesondere."; [1 pg], Blank.; [16 pgs], "Inhalt [!] des zweyten Bandes."; [1]-371, "Zweyter Theil, von den einzelnen Mineralien insbesondere."; [1 pg], Blank.; [50 pgs], "Register über die beyden Bände der

GAUTHIER D'AGOTY

mineralogischen Literatur. I. Register, über die Namen der Schriftsteller.”; [33 pgs], “II. Register, über die abgehandelten Materien.”; [1 pg], “Druckfehler im zweyter Bande.”

VERY RARE. One of the great bibliographies of mineralogy and mining published in the eighteenth century. Particularly useful for its completeness, the bibliography's entries are broken into broad categories of historical works, bibliographies, deterministic mineralogy, crystallography, systems of classification, monographs on specific species, and topographical. Many of the entries contain references to contemporary reviews as well as Gatterer's succinct comments about the value of the listed title. Throughout the work liberal use is made of cross referencing, and at the end of volume two are extensive name and subject indexes.

REFERENCES: BL. • Hoover Collection: no. 335. • LKG: I 13a. • NUC: 192, 411-2 [NG 0078311]. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 566. • Roller & Goodman, *Catalogue*, 1976: 1, 445.

GAUBERT, Paul Marie Benoit. (BORN: St. Bauzély, Aveyron, France, 24 February 1865; DIED: Paris, France, May 1948) *French mineralogist*.

Between 1883 and 1892, Gaubert was a student of Milne Edwards and ALFRED LACROIX, when he studied in Toulouse and Paris. From 1919 to 1920, he was professor of mineralogy at the École des Mines (School of Mines) in Paris. But Gaubert's principle career began in 1893 as préparateur assistant and director of the laboratory at the Muséum d'Histoire Naturelle in Paris. He remained with the Muséum until 1932. In 1909 and again in 1934, he was elected president of the French Mineralogical Society.

REFERENCES: Gaubert, P., *Notice sur les travaux scientifiques de M. Paul Gaubert*. Sens, France, 1927. 103 p., 4 text-figs. • Poggendorff: 5, 414, 6, 857 & 7b, Teil 3, 1558. • Sarjeant, *Geologists*, 1980: 2, 1066.

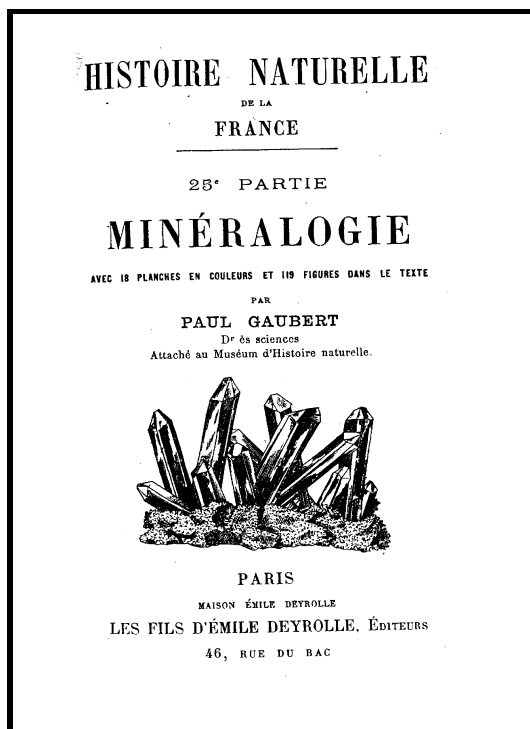
1825. — French, c1897.

Histoire Naturelle | De La | France | [rule] | 25^e Partie | Minéralogie | Avec 18 Planches En Couleurs Et 119 Figures Dans Le Texte | Par | Paul Gaubert | Dr ès sciences | Attaché au Muséum d'Histoire naturelle. | [ornament] | Paris | Maison Émile Deyrolle | Les Fils D'Émile Deyrolle, Éditeurs | 46, Rue Du Bac.

8°: [4], [I]-IV, [1]-261, [3] p., 18 chromolithographic plates showing 119 mineral specimens.

CONTENTS: [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [I]-III, “Introduction.”; IV, “Note Des Éditeurs.”; [1]-233, Text.; [234], Blank.; [235]-241, “Noms.” (=list of localities); [242], Blank.; [243]-245, “Table Des Planches.”; [246], Blank.; [253]-261, “Table Alphabétique.”; [1 pg], Blank.; [2 pgs], “Supplément.”; [At end], 18 plates.

VERY SCARCE. A general mineralogical text emphasising those mineral species that occur in France. It is highlighted by 18 good chromolithographic plates showing 119 mineral specimens. These plates are signed by, “Migneaux et Bideault,” and printed in color by Draeger et Lesieur. The book was published as the 25 part of the series *Histoire Naturelle de la France* (Paris, E. Deyrolle, 1882-19). The text and plates were first issued c1897 with no dated title page and reissued with no significant change at least once more about 1908.



MINÉRALOGIE DE LA FRANCE, 1907

REFERENCES: BL. • BMC. • Internet search. • NUC.

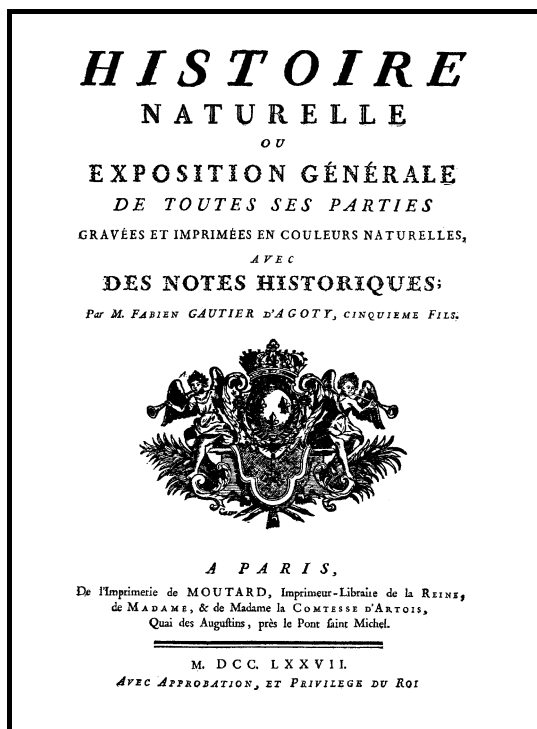
GAUTHIER D'AGOTY, Fabien. (BORN: Paris, France, 1747; DIED: Paris, France, March 1781) *French engraver & publisher*.

Fabien was born the fifth son of Jacques Gauthier d'Agoty, a pioneer in the art of color printing. He lived in Paris until 1755, when the family moved to Nice. They had returned to Paris by 1767, however. Along with his four brothers, Fabien was taught art and color printing by his father, all of whom have printed-color artworks and plates to their credit.

REFERENCES: *Biographie Universelle*: 16, 56-8. • Singer, H.W., “Der Vierfarbendruck in der Gefolgschaft Jacob Christoffel le Blons, mit oeuvre – verzeichnissen der Familie Gautier Dagoty, J. Roberts, J. Ladmirals und C. Lasinos,” *Monatshefte für Kunstwissenschaft*, 10 (1917), nos. 5, 7 & 8, pp. 177-99, 281-292, 301-314. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 32, 345. • Wilson, *History of Mineral Collecting*, 1994. • Wilson, W.E., “Johann Georg Lenz and his Mustertafeln 1794,” *Mineralogical Record*, 27 (1996), no. 3, 191-5, portrait, biblio: 65-76.

1826. — French, 1777 [Prospectus].

Histoire | Naturelle | Ou | Exposition Générale | De Toutes Ses Parties | Gravées Et Imprimées En Couleurs Naturelles, | Avec | Des Notes Historiques; | Par M. Fabien Gautier d'Agoty, cinquieme Fils. | [ornament] | A Paris, | De l'Imprimerie de Moutard, Imprimeur-Libraire de la Reine, | de Madams, & de Madame la Comtesse d'Artois, | Quai des Augustins, près le Pont saint Michel. | [double rule] | M. DCC. LXXVII. | Avec



HISTOIRE NATURELLE [PROSPECTUS]

Approbation, et Privilege du Roi.

4°: [4] p., 8 engraved plates of minerals printed in colors and finished by hand, some heightened in silver or gold. Plate descriptions are done in manuscript. Woodcut coat-of-arms on title. PAGE SIZE: 306 x 230 mm.

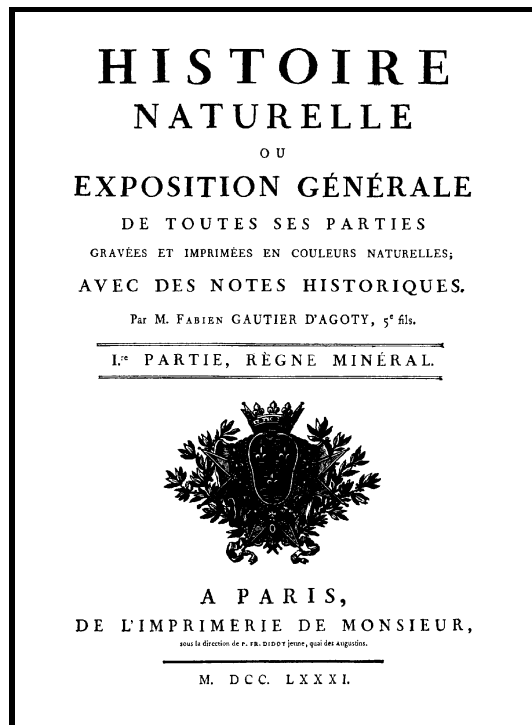
CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Avant-Propos."; 8 engraved, colored plates.

PLATES: Planche I. "Grès Cristallisé de Fontainebleau. Tiré du Cabinet de M. Rome de l'Isle." Planche II. "Mine de Fer Spéculaire Ed Cristallisée. Tiré du Cabinet de M. Rome de l'Isle." Planche III. "Galène Cubique ou Mine de Plomb Sulfureuse. Tiré du Cabinet de M. Rome de l'Isle." Planche IV. "Galène Octaèdre Ou Mine de Plomb Grise. Tiré du Cabinet de M. Nolin." Planche V. "Mine de Fer Cristallisée et colorée. Tiré du Cabinet de M. Rome de l'Isle." Planche VI. "Granit A Gros grains, De Basse-Bretagne. Tiré du Cabinet de M. Rome de l'Isle." Planche VII. "Mine De Fer Spathique Blanche. Tiré du Cabinet de M. Sage." Planche VIII. "Mine d'Argent grise cristallisée."

EXTREMELY RARE, with only one copy known so far. This prospectus advertises the upcoming publication of d'Agoty's *Histoire Naturelle* and solicits subscribers for the project [see next entry]. Included are 8 engraved plates of minerals created by the Le Blon/d'Agoty color printing process, and finished by hand. In 1776, a royal permission was granted to d'Agoty for the publication of a major work illustrating in color the three kingdoms of natural history in realistic depictions. This prospectus provides a sample of the d'Agoty's vision. He writes in the preface that black and white representations can not show minerals

realistically, therefore his *Histoire Naturelle* will utilize printing in colors to convey nature authentically to the reader. Minerals will be the subject of the first portion, but will not go beyond 100 drawings, which should be adequate to show all features of this realm to subscribers. This prospectus is not listed in other bibliographies, and only one copy is currently known to exist.

REFERENCES: BL. • CBN: [no copy listed]. • *Freilich Sale Catalog*: no. 200. • NUC: [no copy listed].



HISTOIRE NATURELLE ... RÈGNE MINÉRAL, 1781.

1827. — French, 1781-[91?].

Histoire | Naturelle | Ou | Exposition Générale | De Toutes Ses Parties | Gravées Et Imprimees En Couleurs Naturelles; | Avec Des Notes Historiques. | Par M. Fabien Gautier D'Agoty, 5^e fils. | [double rule] | I.^{re} Partie, Règne Minéral. | [double rule] | [ornament] | A Paris, | De L'Imprimerie De Monsieur, | sous la direction de P. Fr. Didot jeune, quai des Augustins. | [rule] | M.DCC.LXXXI.

4°: [a]⁴ A-B⁴ C-G² L² I-K² 2L² M-N² 2J² 2K² 3L² 2M² 2N² O-Z²; 64ℓ.; [i]-vij, [1], [1]-119, [1] p., 61 plates (plate 20 usually appears twice, in colored and uncolored states). After the preliminaries, each plate is accompanied by one leaf (2 pages) of text. The *British Library Catalog* lists a copy containing an additional ten plates, but with no text.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vij, "Avant-Propos."; [1 pg], "Privilege Du Roi." &

"Approbation."—dated 2 January 1781.; [1]-119, Text.; [1 pg], Blank.

PLATES: Common elements between all plates are the double rule border surrounding the illustration and the descriptive text. This border is sectioned into two compartments. The larger top compartment is used to display the mineral illustration, while the lower one is used for a text in French that describes the plate's subject and the collection from which the specimen came. The first state of plates 1–30 are all signed in a fashion similar to "Dessiné Gravé et Imprimé en Couleur par Fab. Gautier d'Agoty. 5.^e Fils." These same plates in second state are not signed. Plates 31–40 are signed in a fashion similar to "Desfontaines del, et diree. Bonvallet Sculp." while plates 41–70 are signed "Desfontaines del et sculp." The seventy plate descriptions are as follows:

Planche I. Gres Cristallisé, De Fontainebleau; du Cabinet de M.^r de Romé de Lisle. Pl. II. Groupes de Cristaux De Mine De Fer Lenticulaire de L'Isle d'Elbe, de M.^r de Romé de Lisle. Pl. III. Galene Cubique Ou Mine De Plomb Sulfureuse, de M.^r de Romé de Lisle. Pl. IV. Galene Octaèdre Ou Mine De Plomb, Grise Et Sulfureuse, du Cabinet de M.^r l'Abbé Nolin. Pl. V. Granit De Basse-Bretagne; Du Cabinet de M.^r de Romé de Lisle. Pl. VI. Mine De Fer Spathique Cristallisée En Crêtes De Coq de Baigorri en Basse-Navarre du Cabinet de M.^r Sage. Pl. VII. Mine D'Argent Grise Cristallisée En Tétraèdres Gontre Partie de la Planche VII. du Cabinet de M.^r Sage. Pl. VIII. Groupe de Spath Calcaire l'Enticulaire. Tiré du Cabinet de M.^r de Romé de L'isle. Pl. IX. Groupes et Cristaux détachés de Spath-Calcaire pyramidal. Tiré du Cabinet de M.^r de Romé de L'isle.

Pl. X. Groupe de Mine de Fer Spathique Blanche Rhomboïdale, entremêlée de Marcasites dodécaèdres de Visilés en Dauphiné. Tire du Cabinet de M.^r Besnier de la Pontonnerie, Essayeur général des Monoyes de France. Pl. XI. Cristaux de Selenite en groupes et Solisaires. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XII. Groupes détachés de Spath Vitreux Cubique. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XIII. Groupes de Spath pesant ou Séléniteux rhomboïdal. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XIV. Groupe de Cristaux de Blende octaèdres des mines de Hongrie. Tire de la Collection de M. Jacsb Forster. Pl. XV. Groupes de Cristaux de Blende qui présentent différentes modifications du tétraèdre. Tiré de la Collection de l'Auteur. Pl. XVI. Groupe de Cristaux de Mine de Plomb blanche d'Huelgoet près Poullaon en Basse Bretagne. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XVII. Groupes et Cristaux détachés de mine de Plomb Blauche, Grise, Rouge, Verte, &c. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XVIII. Schorl vert prismatique en saïscaux, entremêlé de Cristaux de Roche, des Alpes Dauphinoises. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XIX. Groupes et Cristaux solitaires de Tourmaline d'Espagne du Tirol et de Ceylan. Tiré du Cabinet de M.^r de Romé de l'Isle.

Pl. XX. Mine Jaune de Cuivre Cristallisée et différens Groupes de Marcassites Cuivreuses. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XXI. Roche de Cristal noir, entremêlée de Cristaux de Feld-Sparth blanc, de Bretagne. Tiré du Cabinet de M.^r Bertin, Ministre et Secrétaire d'Etat. Pl. XXII. Groupe de Cristaux de Soufre citrin, natif des environs de Cadix. Tiré du Cabinet de M.^r Sage. Pl. XXIII. Groupe de Spath pesant ou Séléniteux en tables des Mines du Hartz. Tiré du Cabinet de M.^r de Joubert, Trésorier Général des Etats de Languedoc. Pl. XXIV. Pyrite blanche Arsenicale et Mines de Cobalt grise et blanche. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XXV. Groupe de Cristaux de Sélénite à Angle rentrant. Tiré du Cabinet de M.^r de Joubert. Pl. XXVI. Grenat Dodécaèdre et ses variétés, des Alpes du Tirol. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XXVII. Spath Calcaire en prismes hexaèdres, tronqués net aux 2. bouts; du Hartz. Tiré de la Collection de M. Jacob Forster. Pl.

XXVIII. Différens Groupes de Cristaux de Mines d'Argent rouge et Nitreuse; Tirés des Cabinets de M.M.^s l'Abbé Nolin et de Romé de l'Isle. Pl. XXIX. Ludus Argilleux et jayet à veines calcaires en forme de Ludus; Tiré du Cabinet de M.^r de Romé de l'Isle.

Pl. XXX. Ludus quartzeux et Cellulaire, du C.^{té} de Durham en Angleterre. Tiré de la Collection de M.^r Jacob Forster. Pl. XXXI. Groupe de Spath Séléniteux en Tables. Tiré du Cabinet de M.^r de Joubert. Pl. XXXII. Groupes de Cristaux de Schols violet transparent Rhomboïdal, de la Balme d'Auris en Dauphiné. Tiré du Cabinet de M.^r Sage. Pl. XXXIII. Macles de Schort blanc hexagone et Rhomboïdal, sur un groupe de Cristaux de Roche verdâtre, de Barège dans les Pyrénées. Tiré du Cabinet de M.^r le Marquis de Cubieres. Pl. XXXIV. Groupe de Spath Calcaire Rhomboïdal, de même forme que le Grés Rhomboïdal, de Fontainebleau. Tiré du Cabinet de M.^r de Jobert. Pl. XXXV. Groupe de Cristaux de Mine de Fer Spéculaire, de l'Isle d'Elbe. Tiré du Cabinet de M.^r de Joubert. Pl. XXXVI. Groupes et Cristaux Solitaires de Feld-Spath rougeâtre de Baveno, près du Lac Majeur. Tirés de divers Cabinets. Pl. XXXVII. Mine d'Antimoine en longues Aiguilles divergentes qui traversent de part en part des Rhombes de Spath Séléniteux; de Felsobanya en Transilvanie. Tiré de la Collection de M.^r Jacob Forster. Pl. XXXVIII. Groupes d'Hyacinthes Ensumées, de la Somma au Vesuve. Tirés du Cabinet de M.^r de Cramayel. Pl. XXXIX. Groupe de Cristaux de quartz, d'un rouge de Cornaline, de Geyeren Saxe. Tiré du Cabinet de M.^r Gigos d'Orcy, Receveur Général des Finances.

Pl. XL. Quartz Cristallisé en roses ou en rayons, qui partent en divergeant de différens centres. Tiré du Cabinet de M.^r le Marquis de Cubieres. Pl. XLI. Groupe de Spath calcaire prismatique hexaèdre à pyramides trièdres obtuses, de Schneeberg en Saxe. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XLII. Mine d'Antimoine grise Cristallisée, de Lubillac en Anvergne. Tiré du Cabinet de l'Ecole Royale de Minéralogie docimastique, de l'hôtel des Monnoies. Pl. XLIII. Spath Calcaire pyramidal hexaèdre à pyramides tronquées par trois plans trapézoïdaux, sur un groupe de Spath vitreux Cubique, du Derby Shire. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. XLIV. Mine de Fer grise cristallisée sur une Roche granitique de Framout dans les Vosges. Tiré du Cabinet de M.^r de Romé de l'Isle. Pl. XLV. Macles de Cristaux d'Etain noirs, entremêlées de Cristaux de Roche et de mica Cristallisé, de Zinnwalde en Bohême. Tiré de la Collection de M.^r Jacob Forster. Pl. XLV. Macles de Cristaux d'Etain noirs, entremêlées de Cristaux de Roche et de mica Cristallisé, de Zinnwalde en Bohême. Tiré de la Collection de M.^r Jacob Forster. Pl. XVI. Manganaise Cristallisée en aiguilles prismatiques et divergentes, de Schurde et d'Ilefeld en Thuringe. Tirés du Cabinet de M.^r de Romé de l'Isle, &c. Pl. XLVII. Malachite mammelonée et rubauee, de Sibère. 2^e. morccaux, Tirés de la belle Collection de M.^r Jacob Forster. Pl. XLVIII. Deux morceaux d'Hématite ou Mine de Fer en stalactites dont le supérieur est incrusté de Manganaise; du Comté de Sayn. Tirés de la belle Collection de M.^r Jacob Forster. Pl. XLIX. Pyrise en masse globuleuse et Cristallisée, totalement passée à l'état de Mine de Fer hépatique, d'Angleterre. Tiré de la Collection de M.^r Jacob Forster.

Pl. L. Mine de Cuivre vitreuse rouge cristallisée, mêlée de Cuivre natif, de fleurs de Cuivre soyeuses vertes &c. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LI. Améthiste Gemme ou Basaltine de Saxe. Du Cabinet de M.^r Gigot d'Orcy. Pl. LII. Zéolite Cristallisée en dodécadre comprimée et en Cubes d'Islande. Du Cabinet de M.^r Gigos d'Orcy. Pl. LIII. Groupe de Pirites cuivreuses en octaèdres tronqué. Du Cabinet de M.^r Joubert. Pl. LIV. Groupe de Topases de Sehneckenstein en Saxe. Du Cabinet de M.^r Gigot d'Orcy. Pl. LV. Groupe d'hyacinthes blanches cruciformes d'Andreatberg an hartz.

Du Cabinet de M.^r Gigot d'Orcy. Pl. LVI. Mine de Plomb cornée en prismes, exaèdre et pyramides trièdre obtuses, des mines de la Croix en Lorraine. Du Cabinet de M.^r l'Abbé Nolin. Pl. LVII. Groupe d'Émeraude du Pérou. Du Cabinet de M.^r Gigot d'Orcy. Pl. LVIII. Manganèse en Stalactites de Eizenzeche près Nassau Siegen. De la Collection de M.^r Jacob Forster. Pl. LIX. Spats Calcaire à pyramides exaèdre obtuses de la porte de France à Grenoble, et du hartz. Du Cabinet de M.^r de Romé de l'Isle.

Pl. LX. Hematite colorée et chatoyante de Hongrie. Du Cabinet de M.^r Gigot d'Orcy. Pl. LXI. Cinabre Cristallisé, d'Isdria en Carinthie. Tiré du Cabinet de M.^r de la Bore. Pl. LXII. Spath en Barre; de Freyberg en Saxe. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LXIII. Azur de Cuirvre Cristallisé, du Bannal de Temeswar. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LXIV. Spath Calcaire Rhomboïdal, dont la base de réunion des Pyramides, est Tronquée en double Biseau. Tiré du Cabinet de M.^r Gavangeot. Pl. LXV. Spath vitreux en Cube violet Tronqué en Biseaux sur les bords, de Northumberland. Tiré de la Belle Collection de M.^r Forster. Pl. LXVI. Chorle vert, du Cap de Bonne Espérance. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LXVII. Zéolite en Octaèdre surbaissé de Feroé. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LXVIII. Spath pesant verticillé, Mica vert des Saxons, de Johann Géorgenstade. Tiré du Cabinet de M.^r Gigot d'Orcy. Pl. LXIX. Spath vitreux en Cubes à Angle Tronqué, et Mica de Zennwald, en Bohême. Tiré du Cabinet de M.^r de la Bove. Pl. LXX. Mine jaune de Cuirvre Cristallisée, du Comté de Sayn. Tiré du Cabinet de M.^r Gigot d'Orcy.

VERY RARE. This book is one of the finest colored mineralogies ever published. The process employed in producing this work initially involved the direct printing of primary colors on the plates, rather than the then common practise of hand coloring. By successive overprinting, each time with one of four different color inks, an accurate portrayal of the minerals was achieved. The process proves so successful within this volume, that this work ranks among the very finest of the early colored mineralogies ever published. Unfortunately for the collector, this work must also be considered to be among the very rarest of colored mineral books.

In 1776, Fabien was granted a Royal Permission to print and sell a general *Histoire Naturelle*, which would describe and illustrate the three realms of nature. The 1781 announcement and request for subscribers clearly outlined his intentions for the work. It would commence with a description of the mineral kingdom (Règne Minéral), and would appear in 8-10 "cassiers," each with ten plates (decades) and explanatory text by the great French crystallographer, JEAN BAPTISTE LOUIS ROMÉ DE L'ISLE. Recommendations from mineralogists would be sought on which specimens to illustrate so that the reading public could gain a larger appreciation for this kingdom of nature. However, due to the death of d'Agoty soon after printing began, the publication as it was envisioned was never finished. In fact, only six or seven cassiers were published, and of these only the first three were engraved, printed and sold under Fabien's supervision. The remaining parts were published by his widow, Madame Veuve d'Agoty, whose name appears on the wrappers beginning with the fourth issue. In her efforts to complete the book she was assisted by FRANÇOIS LOUIS SWEBACH DESFONTAINES

and Bonvallet both of whom designed and engraved plates 31-40, while Desfontaines continued on alone producing plates 50-70 that comprise the remainder of the work.

Many references to the first four installments appear in the second edition of Romé de l'Isle's *Cristallographie* (4 vols., Paris, 1783). But after those mentions the publishing history is obscure. The fact that the majority of copies of this book contain forty or less plates indicate the publication lapsed for some time after the fourth decade was issued. Only a few copies are known to contain plates 50-60, and only the *British Library Catalog* lists a copy with seventy plates, although no description text accompanies plates 61-70. The lack of descriptions with the plates may indicate that the final installment was prepared after Romé de l'Isle's death in 1790. One last tantalizing clue appeared in the "Avertissement" to Desfontaine's *Manuel Cristallographie* (Paris, 1792). There he explains that he will complete a work begun by Romé de l'Isle and of which seven decades had already appeared. This is undoubtedly a reference to d'Agoty's work, but alas Desfontaine's claim was never fulfilled, and the last hope for continuing Fabien's remarkable book evaporated.

There is strong indication that coloring the plates by successive overprinting probably caused tremendous difficulties. Of the several copies of this work examined, all contain a mixture of plates that are either color printed or hand-colored. The process employed on individual plates can be identified by looking for the four tiny pin holes at the corners of the color printed plates that were used to register the paper on the press. In addition, plates 1-40 that are known to have been color printed, are also known in hand colored states. Copies of this book with color print plates are the more uncommon and more desirable to obtain.

Facsimile reprint, 1991: Natural | History | Or | General Exposition | Of All Its Parts | Engraved And Printed In Natural Colors; With Historical Notes. | By Mr. Fabien Gautier D'Agoty, 5th son. | [double rule] | 1st Part, Mineral Kingdom. | [double rule] | Paris, | From The Printing House Of Monsieur, | under the direction of P. Fr. Didot the younger, Quay des Augustins. | [rule] | M. DCC. LXXXI. | • | Tucson, | New Edition | Published By The Mineralogical Record, | under the direction of W.E. Wilson | [rule] | © M. CM. XCI. | Edition limited to 52 copies. 4^o: [i]-xxxviii, [1]-119, [1] p., 80 color plate reproductions.

[i-ii], Facsimile of the original title page, verso blank.; [iii-iv], Facsimile reprint title page (as above), verso blank.; [v], "Privilège Du Roi."; [vi], "Royal Charter."; [vii]-xi, "Avant-Propos."; [xii], Blank.; [xiii]-xvii, "Preface" [=translation of original preface.]; [xviii], Blank.; [xix]-xxx, "Preface | To The New Edition." signed Wendell E. Wilson & T.G. Vallance, November 1991.; [xxxi]-xxxviii, "Plates."; [1]-119, Text.; [1 pg], Blank.

This facsimile edition of the *Histoire Naturelle* was published as part of a series of limited reproductions of rare, illustrated mineralogical works prepared by Wendell E. Wilson of the *Mineralogical Record*. This reprint contains translations of the Privilège Du Roi and d'Agoty's preface. Additional introductory material provides historical information about the author and the printing history of the book, as well as a descriptive list of

GAUTHIER D'AGOTY

the plate contents in English. The complete text in French of the original is reproduced as are plates 1-70. Nine of the plates are reproduced twice to show the difference between first and second state impressions.

REFERENCES: *Freilich Sale Catalog*: no. 201. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 250-1. • NUC: 193, 13. • *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts*: 17 (1780), no. 1, 321-3. • Singer, H.W., "Der Vierfarbendruck in der Gefolgschaft Jacob Christoffel le Blons, mit oeuvre – verzeichnissen der Familie Gautier Dagoty, J. Roberts, J. Ladmirals und C. Lasinos," *Monatshefte für Kunstwissenschaft*, 10 (1917), nos. 5, 7 & 8, pp. 177-99, 281-292, 301-314. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 13, 290-4. • Wilson, *History of Mineral Collecting*, 1994. • Wilson, W.E., "Fabien Gautier d'Agoty and his *Histoire Naturelle Règne Mineral*, 1781," *Mineralogical Record*, 26 (1995), ??-??.

GAUTHIER D'AGOTY, Jacques-Fabien. (BORN: Marseille, Franch, 1716; DIED: Paris, France, 1785) *French printer & publisher.*

In his youth, Gauthier d'Agoty was probably trained as an artist and engraver. He moved to Paris about 1736, and became an apprentice to Jacques Christophe Leblon [1670-1741] who had secured in 1737 an exclusive privilege to use a three color printing process that he had invented. In 1738 Gauthier struck out on his own and founded his own printing and engraving operation that utilized a four color process to improve the final renderings. Thus established Gauthier produced color plates showing historical scenes, landscapes, portraits, anatomical diagrams, flowers, and other natural objects.

REFERENCES: DBF: ??, ??. • *Nouvelle Biographie Générale* (Hofer): ??, ??. • Singer, H.W., "Der Vierfarbendruck in der Gefolgschaft Jacob Christoffel le Blons, mit oeuvre – verzeichnissen der Familie Gautier Dagoty, J. Roberts, J. Ladmirals und C. Lasinos," *Monatshefte für Kunstwissenschaft*, 10 (1917), nos. 5, 7 & 8, pp. 177-99, 281-292, 301-314.

1828. — French, 1752-5 [Periodical].

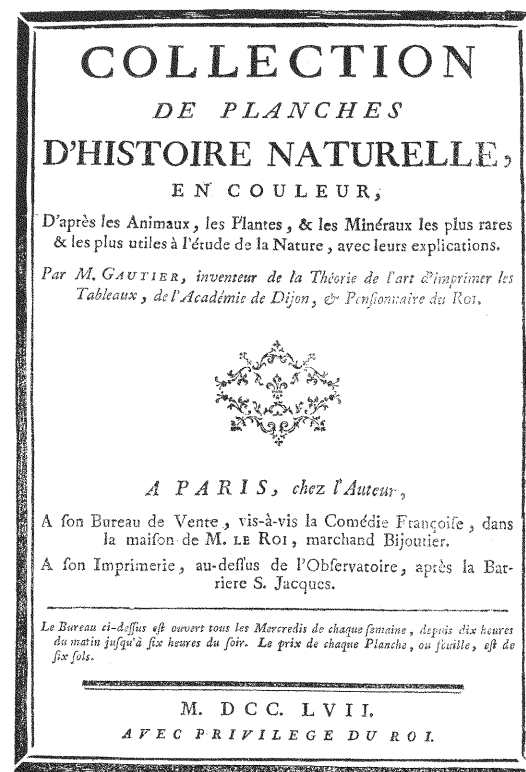
Observations | Sur | L'Histoire Naturelle, | Sur | La Physique | Et | Sur La Peinture. | Avec Des Planches Imprimées En Couleur; | Cet Ouvrage renferme les Secrets des Arts, les nouvelles découvertes, & les disputes des Philosophes & des Artistes modernes. | Année 1752. | Tome Premier. I. Partie. | [ornament] | A Paris, Chez Delaguette, rue S. Jacques, à l'Olivier. | [triple rule] | Avec Approbation et Privilege Du Roy. | [rule] | Les Plances en couleur se distirbuent séparément chez M. Gautier, Pensionnaire du Roy, rue de la Harpe. 6 vols. (published in 18 parts). 4°.

VERY RARE. Edited by Jacques-Fabien Gauthier d'Agoty. This rare periodical publication contains information about the arts and sciences, new discoveries, and philosophical and artistic controversies. It was illustrated with plates engraved using the process invented by J.C. Le Blon and improved by Gauthier D'Agoty. The illustrations were printed from four separate plates colored with red, yellow, blue, and black inks.

Continued as: *Observations Périodiques sur la Physique, l'Histoire Naturelle, et les Beaux-Arts*, of which volume one was edited by J. Gauthier d'Agoty and volume two by F.V. Toussaint. The plates were

executed by Arnaud Eloï Gauthier d'Agoty [1741-1780], first son of the editor.

REFERENCES: BL: [432.i.6-10.]. • Bolton, *Catalogue of Periodicals*, 1897. • NUC. • Singer, H.W., "Der Vierfarbendruck in der Gefolgschaft Jacob Christoffel le Blons, mit oeuvre – verzeichnissen der Familie Gautier Dagoty, J. Roberts, J. Ladmirals und C. Lasinos," *Monatshefte für Kunstwissenschaft*, 10 (1917), nos. 5, 7 & 8, pp. 177-99, 281-292, 301-314: [pp. 186-8].



COLLECTION DE PLANCHES, 1757

1829. — French, 1757.

[Contained within a double rule box:] Collection | De Planches | D'Histoire Naturelle, | En Couleur, | D'après les Animaux, les Plantes, et les Minéraux les plus rares | & les plus utiles à l'étude de la Nature, avec leurs Explications. | Par M. Gautier, inventeur de la Théorie de l'art d'imprimer les | Tableaux, de l'Académie de Dijon, & Pensionnaire du Roi. | [ornament] | A Paris, chez l'Auteur, | A son Bureau de Vente, vis-à-vis la Comédie François, dans | la maison de M. le Roi, marchand Bijoutier. | A son Imprimerie, au-dessus de l'Observatoire, après la Bar- | rière S. Jacques. | [rule] | Le Bureau ci-dessus est ouvert sous les Mercredis de chaque semaine, depuis dix heures | du matin jusqu' à six heures du soir. Le prix de chaque Planche, ou seuille, est de | six sols. | [double rule] | M. DCC.

LVII. | Avec Privilege Du Roi.

4°: [34] p., 43 mezzotint plates (printed in colors).

VERY RARE. The majority of these plates relate to the anatomy of the humans. They were sold separately by subscription and amounted to a total of 43 exquisitely colored depictions executed by Jacques Gauthier d'Agoty and his son Arnaud Eloï Gauthier d'Agoty [1741-1780]. The title indicates that one or more plates are relevant to mineralogy, but no copy of this work has been examined to authenticate this supposition.

REFERENCES: Franklin, C., *A catalogue of early colour printing from chiaroscuro to aquatint*. Oxford, The authors, 1977. • Singer, H.W., "Der Vierfarbendruck in der Gefolgschaft Jacob Christoffel le Blons, mit oeuvre – verzeichnissen der Familie Gautier Dagoty, J. Roberts, J. Admirals und C. Lasinos," *Monatshefte für Kunstwissenschaft*, 10 (1917), nos. 5, 7 & 8, pp. 177-99, 281-292, 301-314: [p. 190; not seen].

GAUTIERI, Giuseppe. (BORN: 5 July 1769; DIED: 23 February 1833) *Italian physician & mineralogist*.

REFERENCES: ABI: I 462, 118-135. • *Biographie Universelle*. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • *Nouvelle Biographie Générale* (Hoefer): 65, 182-4. • Poggendorff: 1, col. 859. • WBI.

1830. — German, 1800.

Untersuchung über die Entstehung, Bildung und den Bau des Chalcedons und der mit ihm verwandten Steinarten, insbesondere aber des Chalcedons bon Tresztya in Siebenburgen ... Jena, Voigt, 1800.

8°: xvii, 360 p.

VERY SCARCE. Apparently a comprehensive study of chalcidony.

REFERENCES: BL: [987.g.29.]. • BMC. • LKG: XVI 185. • Sinkankas, *Gemology Bibliography*, 1993: no. 2323.

1831. — Italian, 1805.

Slancio sulla genealogia della terra e sulla costruzione dinamica della organizzazione, seguito da una ricerca sull'origine dei vermi abitanti le interiora degli animali. [Jena,] 1805.

8°: viii, 136 p.

VERY SCARCE. The genealogy of the earth [?].

Related work: *Idea dello slancio sulla genealogia della terra, sulla costruzione dinamica della organizzazione, sulla origine de' vermi abitanti le interiora degli animali, del dottor G. Gautieri di Novara*. [A critique signed V. M.] Padova, 1806. [BL, 7109.b.32.]

REFERENCES: LKG: XIII 238 7 XIV 655. • Wellcome Catalog (Books).

1832. — Italian, 1807.

Confutazione della opinione di alcuni mineraloghi sulla volcanità de' monticelli collocati tra Grantola e Cunardo nel Dipartimento del Lavio. Milano, 1807.

8°: VERY SCARCE.

REFERENCES: BL: [T.965.(13.)].

GAUTRON DE ROBIEN, Christophe Paul.

1833. — French, 1751.

Nouvelles Ide'es | Sur | La Formation | Des Fossiles. | [ornament] | A Paris, | Chez David l'ainé, rue S. Jacques; | à la Plume d'Or. | [double rule] | M. DCC. LI. | Avec Approbation & Privilege du Roi.

8°: π^1 a³ A-I⁸ 2A⁸ 2B⁴; 88ℓ.; [2], [i]-vj, [1]-141, [3], [1]-17, [7] p., one plate (folding; showing crystals and minerals). PAGE SIZE: 160 x 95 mm.

CONTENTS: [2 pgs], Title page, verso blank; [i]-vj, "Preface."; [1]-141, Text.; [3 pgs], "Approbation."; [1]-17, Text.; [1 pg], Blank.; [5 pgs], "Explication | Des Planches."; [1 pg], Blank.; [At end], one folding plate.

VERY SCARCE. The text presents the author's new ideas on the formation of fossiles and figured stones.

REFERENCES: Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 4, 1, p. 165. • Dewalque, Gustav., *Catalogue des Ouvrages de Géologie, de Minéralogie et de Paléontologie ainsi que des Cartes Géologiques qui se trouvent dans les principales bibliothèques de Belgique*. Liège, 1884. xii, [2], 394 p: p. 307. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 241. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 248. • LKG: XIII 72 & 73a.

GEERTS, Antonius Johannes Cornelius. (BORN: 1843; DIED: 1883) *Dutch chemist*.

1834. — French, 1878.

Les Produits | De La Nature | Japonaise Et Chinoise | Comprenant | La Dénomination, L'Histoire Et Les Applications Aux Arts, A L'Industrie, A | L'Économie, A La Médecine, Etc. | Des Substances Qui Dérivent Des Trois Règnes De La Nature Et Qui | Sont Employées Par Les Japonais Et Les Chinois | Par | A.J.C. Geerts | [rule] | Partie Inorganique Et Minéralogique | Contenant | La Description Des Minéraux Et Des Substances Qui Dérivent Du | Règne Mineral. | [ornate rule] | Yokohama | G. Lévy, Imprimeur-Éditeur | [short rule] | 1878 | Propriété de L'Éditeur | Droits de traduction et de reproduction réservés.

2 parts. [Part 1: 1878] 8°: [8], [I]-XI, [1], [1]-294, [2] p., one folding table (p. 84), 15 folding plates. [Part 2: 1883] 8°: [4], [295]-662 p., one folding table (p. 378), 8 folding plates. PAGE SIZE: 228 x 145 mm.

CONTENTS: [Part 1] [2 pgs], Half title page, "Les Produits | De La Nature | Japonaise Et Chinoise", verso "Yokohama.—Imprimerie De L'Écho Du Japon"; [1 pg], Blank.; [1 pg], Title page in Japanese and Chinese.; [1 pg], Title page.; [1 pg], Blank.; [1 pg], Dedication.; [1 pg], Blank.; [I]-XI, "Préface."; [1 pg], Blank.; [1], "Abréviations"; [2], Blank.; [3]-294, Text.; [1 pg], "Classe Des Métalloïdes"; [1 pg], Blank.

[Part 2] [2 pgs], Half title page, "Les Produits | De La Nature | Japonaise Et Chinoise", verso "Yokohama.—Imprimerie De L'Écho Du Japon"; [1 pg], Blank.; [1 pg], Title page in Chinese and Japanese.; [295], Title page.; [296], Blank.; [297]-662, Text.

VERY RARE. This widely unknown work is based upon the title a remarkable and important study that describes the history and the application in the arts, industry, the economy, medicine, etc., substances that derive from the three reigns of nature and which are

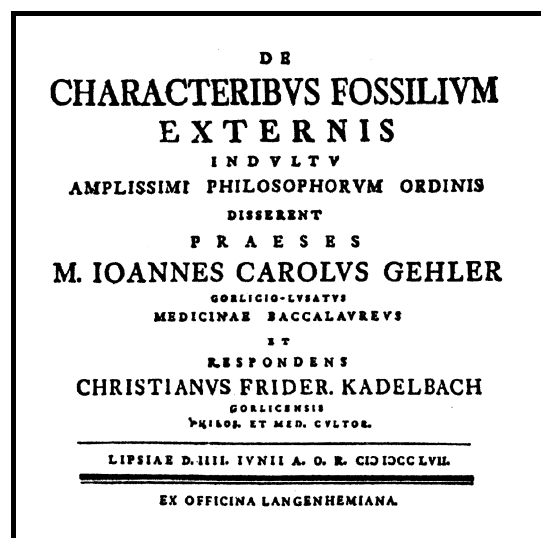
employed by the Japanese and Chinese. The present title concentrates on the inorganic and mineralogical objects and was published across two parts in 1878 and 1883 (it is not known if the other two realms were ever published). Included are descriptions of the minerals and mineral resources as they were known in late nineteenth century China and Japan. The author a chemist and prize winning mineral collector has relied heavily on previous books to formulate the body of his own work. His citations include ancient native works as well as titles published since 1712 by European visitors. Full historical descriptions are given of the ancient oriental technologies for mining and the processing of the recovered ores. Some of these are depicted on the plates that show oriental figures at work mining and milling ore as well as depictions of the ancient tools used in mining. Mention is also made of the mineral species known in the region. The work was published in Yokohama, Japan by C. Lévy who arrived in 1868, founded a French language newspaper and printed small press runs of works for the small group of Europeans that were established in Japan.

REFERENCES: BL: [7944.cc.8.]. • Margerie, *Bibliographies Géologiques*, 1896: no. 3163. • NUC.

GEHLER, Johann Karl. (BORN: Görlitz, Saxony, Germany, 17 May 1732; DIED: Leipzig, Saxony, Germany, 6 May 1796) *German physician*.

Son of Johann Wilhelm [1696-1765], Gehler started his career as a specialist in child birth. He then held professorships at the University of Leipzig in botany (1762), anatomy and surgery (1780) and finally physical therapy (1789). Throughout his life he studied mineralogy and chemistry.

REFERENCES: ADB. • Baur, *Allgemeines historisches Handwörterbuch*, 1803. • *Catalogue of Portraits of Naturalists*: 471 [1 portrait listed]. • DBA: I 374, 277-341; 1429,3 0-33; II 433, 47-48. • DBE. • Hirsch, *Biographisches Lexikon*, 1884-8. • Lambrecht & Quenstedt, *Catalogus*, 1938: 156. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: I, col. 867. • WBI.



DE CHARACTERIBVS FOSSILIVM, 1757

1835. — Latin, 1757 [Dissertation].

De | Characteribvs Fossilivm | Externis |
Indvltv | Amplissimi Philosophorum Ordinis |
Disserent Praeses | M. Ioannes Carolvs Gehler |
Gorlicio-Lvsatvs | Medicinæ Baccalavrevs | Et
Respondens | Christianvs Frider. Kadelbach |
Gorlicensis | Philos. Et Med. Cvltor. | [rule]
Lipsiae D.III. Ivni A.O.R. CIO IOCC LVII. |
[double rule] | Ex Officina Langenhemiana.

4°: A-E⁴; 20ℓ.; [1]-40 p., one engraved plate

VERY RARE. Dissertation – Christian Frieder Kadelbach, respondent. A philosophical discussion of the external characters of minerals. As a student, Werner obtained a copy of this work, and started about translating it into German. However, the errors in Kadelbach's work caused him to abandon the translation and publish his own original treatise, *Von den äusserlichen Kennzeichen der Fossilien*, in 1774.

Reprint, 1790: The British Library reports that Gehler's dissertation was reprinted in Christian Friedrich Ludwig's, *Delectus opusculorum ad scientiam naturalem spectantium*. Volumen primum. Edidit Christianus Frider. Ludwig. Lipsiae, Apud S.L. Crusium, 1790. vi, 560 p., 7 plates. [No more published.; BL, 958.h.17.; cf. Pritzel (2nd ed.), no. 5658.]

REFERENCES: BL: [B.385.(18.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: I, 251. • *Göttingische gelehrte Anzeigen*: 1757, p. 1274. • Lima-de-Faria, *Historical Atlas of Crystallography*, 1990: 130 [portrait and title page]. • LKG: IX 4.

1836. Dissertation, 1786: Ordinis medicorum ... Procancellarius D.J.C.G. Panegyri Medicam ... indicit. Inest Fossilium Physiognomiae Specim. I. [Lipsiae, 1786.]

4°: A⁴ B²; 6ℓ.; [1]-12 p.

VERY SCARCE. Dissertation – Ant. Hen. Lud. Bruhm, respondent.

REFERENCES: LKG: IX 5a. • NUC: 193, 506.

1837. Dissertation, 1793: Ordinis medicorum ... Procancellarius J.C.G. ... panegyri medicam ... indicit. De quibusdam varioribus agri Lipsiensis petrificatis. Spec. I. Trilobites s. Entomolithus paradoxus Linn. [Lipsiae, 1793].

4°: A⁴ B²; 6ℓ.; [1]-12 p., one plate.

VERY SCARCE. Dissertation – Fridrich Augustus Treutler, respondent.

REFERENCES: BL: [B.366.(10.)]. • LKG: XIV 209.

GEIKE, Archibald. (BORN: Edinburgh, Scotland, 28 December 1835; DIED: Halsemere, Surrey, England, 10 November 1924) *Scottish geologist*.

In the early part of this century, one of the most well known and respected geologists was Edinburgh-born Archibald Geikie, expert on the processes of erosion. In 1855, Geikie was appointed to the Geological Survey of Great Britain under Murchison and ten years later was elected to the prestigious Royal Society, also becoming the first Director of the Scottish Geological Survey founded in 1867. Geikie's studies showed that rivers play a major role in soil erosion and established him as the foremost advocate of the fluvial theories of erosion. His best own works include: *The Scenery of Scotland* (1865), *Life of Sir R. J. Murchison* (1875), *Test-Book of Geology* (1882), *The Founders of Geology* (1897), *The Ancient Volcanoes of Great Britain* (1897) and *Outlines of Field Geology* (1876), most of which have remained in general use, having been reissued at various dates.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 96. • Cleevely, *World Palaeontological Collections*, 1983:

126. • DNB. • DSB: 5, 333-8. • *Encyclopaedia Britannica*, 11th edition. • Lambrecht & Quenstedt, *Catalogus*, 1938: 156. • Poggendorff: 3, 501-2, 4, 486-7 & 5, 418. • Sarjeant, *Geologists*, 1980: 2, 1071-3. • Sarjeant, *Geologists*, Suppl. 1, 1986: 1, 437. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 646. • *World Who's Who in Science*: 640.

1838. — English, 1897 [First edition].

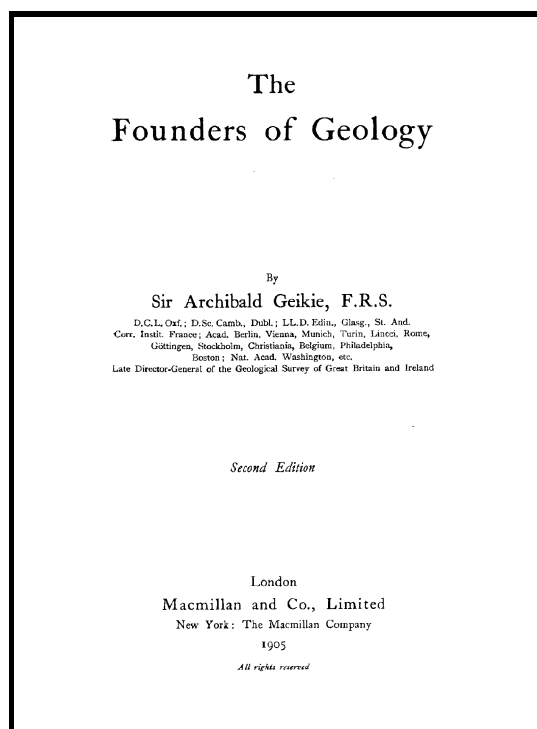
The | Founders Of Geology | By | Sir Archibald Geike, F.R.S. | [...3 lines of titles and memberships...] | London | Macmillan And Co., Limited | New York: The Macmillan Company | 1897 | All rights reserved.

8°: π^5 B-T⁸ U⁶; 155 ℓ .; [i]-x, [1]-297, [3] p. PAGE SIZE: 204 x 130 mm.

CONTENTS: [i-ii], Half title page, "The Founders Of Geology," verso ornament.; [iii-iv], Title page, verso blank.; [v]-viii, "Preface."—dated 18 June 1897.; [ix]-x, "Contents."; [1]-289, Text.; [290], Blank.; [291]-297, "Index."; [1 pg], Blank.; [2 pgs], Publisher's list.

VERY SCARCE. The text is divided into 6 lectures.
1. The Cosmogonists. 2. The Rise of Volcanic Geology.
3. History of the Doctrine of Geological Succession.
4. Rise of the Modern Conception of the Theory of the Earth. 5. The Rise of Stratigraphical Geology.
6. The Transition or Greywacke Formation resolved by Sedgwick and Murchison into the Cambrian, Silurian and Devonian systems.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 449.



THE FOUNDERS OF GEOLOGY, 1905

1839. 2nd edition, 1905: The | Founders of Geology. | By | Sir Archibald Geikie, F.R.S. | [...5 lines of titles and memberships...] | Second Edition | London | Macmillan and Co., Limited | New York: The Macmillan Company | 1905 | All rights reserved.

8°: [i]-xi, [1], [1]-486, [2] p., index. PAGE SIZE: 224 x 142 mm.

CONTENTS: [i-ii], Half title page, "The Founders of Geology," verso ornament.; [iii-iv], Title page, verso "First Edition (Extra Crown 8vo) 1897. | ..."; [v]-vii, "Preface."—dated 9 November 1905.; [viii], Blank.; [ix]-xi, "Contents."; [1 pg], Blank.; [1]-473, Text.; [474]-486, "Index."; [2 pgs], Publisher's list.

SCARCE. One of the best histories of geology and accompanying sciences ever published in the English language. It recounts the story of the progress of geological ideas by reviewing the careers of some of the leaders by whom the progress was chiefly effected, giving full consideration to the lives and work of these major figures, and indicating in the process how geological ideas arose and were slowly worked out into the forms which they now wear. Some of the men whose careers and contributions are examined are Palissy, Guettard, Desmarest, Pallas, De Saussure, Arduino, Lehmann, Fuchsel, Werner, Hutton, Playfair, Sir James Hall, Giraud-Soulavie, Cuvier, Michell, Lyell, Logan, Darwin, Agassiz, Nicol, and others.

The author discusses such matters as geological ideas among the Greeks and Romans; growth of geological ideas in the Middle Ages; scientific cosmogonists- Descartes and Leibnitz; the rise of geology in France; the foundation of volcanic geology; the rise of geological travel; the history of the doctrine of geological succession; the Wernerian school of geology; the rise of the modern conception of the theory of the earth; the birth of experimental geology; the rise of stratigraphical geology and paleontology; early teachers and textbooks; the transition or Greywacke formation resolved into the Cambrian, Silurian and Devonian systems; the primordial fauna of Barrande; the pre-Cambrian rocks first begun to be set in order; the influence of Darwin; adoption of zonal stratigraphy of fossiliferous rocks; the rise of glacial geology; the development of geological map-making in Europe and North America; the rise of petrographical geology; and other related topics.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 449.

GEISSLER, Johann Gottlieb. (BORN: 1713; DIED: 1795) *German mineral dealer.*

German mineral dealer of Leipzig. His collection was sold in 1792.

REFERENCES: Poggendorff: 1, col. 869?. • Wilson, W.E., "Johann Georg Lenz and his Mustertafeln 1794," *Mineralogical Record*, 27 (1996), no. 3, 191-5, portrait, biblio: 172.

1840. — German, 1792 [Collection catalog].

Verzeichniss der Geisslerischen Mineralien-Sammlung zu Leipzig. Leipzig, 1792.

2 parts and supplements. [Part 1: 1792] 8°: 368 p.; [Part 2: 1792] 8°: 336 p.; [Supp. 1: 1796] 8°: 16 p.; [Supp. 2: 1798] 8°: 32 p.; [Supp. 3: 1799] 8°: 22 p.

VERY RARE. Collection and sale catalogs of an early Leipzig mineral dealer by the name of Geissler. He wrote these works in order to describe his collection which was apparently also for sale.

REFERENCES: *Allgemeine Literatur-Zeitung*: 1795, no. 4, 3. • BL: [972.e.25.]. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 52. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 269. • GV (1700-1910): 151, 193. • Wilson, *History of Mineral Collecting*, 1994: 212.

GELLERT

GELLERT, Christlieb Ehregott. (BORN: Haynichen near Freiberg, Germany, 11 August 1713; DIED: Freiberg, Germany, 18 May 1795) *German chemist & metallurgist.*

Brother of a famous German poet. Gellert studied at Meissen and Leipzig. From 1736 through 1737, he worked as an instructor at the Gymnasium in Petersburg, then he became adjunct at the Akademie der Wissenschaften until 1746. In 1747 he settled in the mining town of Freiberg he held several positions related to the mining and metallurgical industry. At the founding of the BergAkademie in 1765, he was appointed professor of metallurgy and chemistry. Gellert introduced the process of cold extraction of precious metals by the use of mercury, a works (the largest of the time) being built in at Halsbruck in 1790.

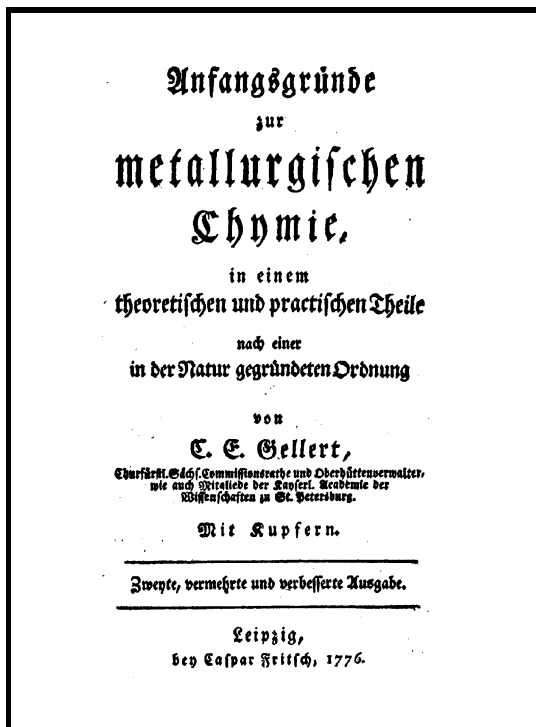
REFERENCES: ADB: 8, 548. • Baur, *Allgemeines historisches Handwörterbuch*, 1803. • DBA: I 378, 92-104; 1429, 55-56; II 436, 334-337. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • NDB. • Poggendorff: 1, col. 870. • WBI.

1841. — French, 1758.

Chimie metallurgique dans laquelle on trouvera la theorie & la pratique de cet art avec des experiences sur la densite des alliages des metaux, & des demi-metaux, & un abrege de docimastique ... par C.E. Gellert ... Ouvrages traduits de l'Allemand. Paris, Chez Briasson, 1758.

2 vols.

VERY SCARCE. Mineralogy, Determinative. Chemistry, Metallurgic.



ANFANGSGRÜNDE, 1776

1842. — German, 1772-6 [2nd edition].

Anfangsgründe | zur | metallurgischen | Chymie, | in einem | theoretischen und practischen Theile | nach einer | in der Natur gegründeten Ordnung | von | C.E. Gellert, | [...3 lines of titles and memberships...] | Mit Kupfern. | [rule] | Zweyte, vermehrte und verbesserte Ausgabe. | [rule] | Leipzig, | bey Caspar Fritsch, 1776.

[TITLE PAGE TO VOLUME 2 READS:]

Anfangsgründe | zur | Probierkunst. | [ornate rule] | Als der Zweyte Theil | der practischen | Metallurgischen Chymie, | worinnen | verschiedene neue Arten zuverlässig | zu probieren, gezeigt werden, | abgefasst von | C.E. Gellert, | [...3 lines of titles and memberships...] | [rule] | Neue mit einigen Zusätzen von dem Verfasser | vermehrte Auflage. | [rule] | Leipzig, | bey Caspar Fritsch, 1772.

2 parts in one volume. [Part 1: 1772] 8°: *7 **7 A-Hh⁸ Ii⁶; 263ℓ.; [28], [1]-498 p., frontispiece, 5 folding plates. [Part 2]: 1776] 8°:)(7 A-L⁸; 95ℓ.; [14], [1]-168, [8] p., 3 folding plates. PAGE SIZE: 176 x 106 mm.

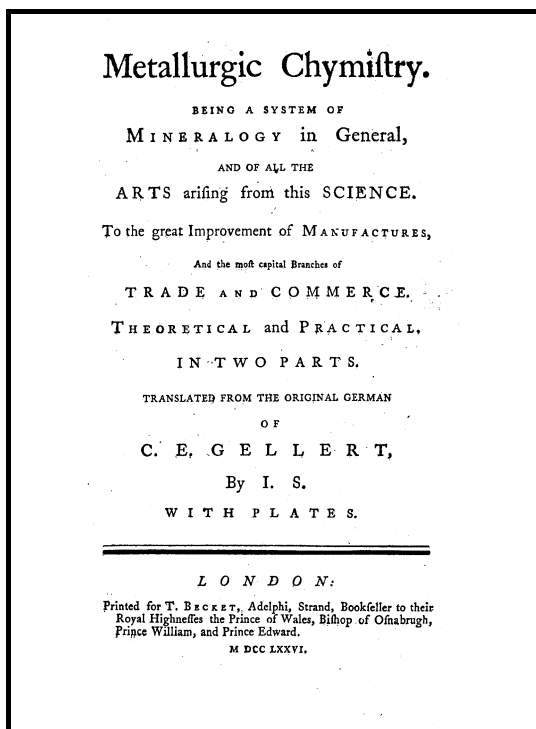
CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [4 pgs], "Vorrede | zur ersten Auflage."—dated October 1750.; [2 pgs], "Vorrede | zum zweyten Theile."; [8 pgs], "Vorrede | zur zweyten Ausgabe."; [12 pgs], "Inhalt | des ersten theoretischen Theils."; [1], Sectional title page, "Der | Metallurgischen Chymie | Erster theoretischer Theil."; [2], Blank.; [3]-470, Text.; [471]-498, "Register." [Vol 2] [2 pgs], Title page, verso blank.; [8 pgs], "Vorbericht."; [6 pgs], "Inhalt."; [1]-168, Text.; [6 pgs], "Register."; [2 pgs], "Erklärungen derer Figuren."

VERY SCARCE. Second greatly enlarged edition of this very popular work on metallurgical and mineralogical chemistry. It includes the addition of a second volume titled *Anfangsgründe zur Probierkunst*, which provides an introduction to assaying techniques. In this work he modified Geoffrey's affinity table by having a table of 28 columns of symbols in which substances having the least affinity with the substance at the head of the column are put on top, i.e. the reverse of Geoffrey's order. In this work on the density of alloys he showed that this may be greater or less than the calculated by the mixture rule; it was mostly greater. Gellert attributes this to the existence of pores in the metals. He also experimented the magnetism of alloys of iron.

REFERENCES: Cole, *Chemical Literature*, 1988: no. 513. • Darmstädter, *Berg-Büchlein*, 1926: no. 106. • *Freilich Sale Catalog*: no. 203. • Hoover Collection: no. 341.

1843. English transl., 1776: Metallurgic chymistry. | Being A System Of | Mineralogy in General, | and of all the | Arts arising from this Science. | To the great Improvement of Manufactures, | And the most capital Branches of | Trade and Commerce. | Theoretical and Practical. | In Two Parts. | Translated From The Original German | Of C.E. Gellert, | By I.S. | [double rule] | London: | Printed for T. Becket, Adelphi, Strand, Bookseller to their | Royal Highnesses the Prince or Wales, Bishop of Osnabrugh, | Prince William, and Prince Edward. | M DCC LXXVI.

8°: π⁴ B-C⁴ 2B⁸ 2C⁸ D-Z⁸ Aa-Ee⁸ Ff⁴; 220ℓ.; [4], [i]-iii, [1], [i]-xv, [1], [1]-416 p., 4 plates (folding; numbered



METALLURGIC CHYMISTRY, 1776

Tab. I-IV), one large folding table (facing page 184). PAGE SIZE: 210 x 130 mm.

CONTENTS: [2 pgs], Half title page, "Metallurgic | Chymistry. | In Two Parts," verso blank.; [2 pgs], Title page, verso blank.; [i]-iii, Dedication to the Royal Society signed John Seiferth, 20 August 1766.; [1 pg], Blank.; [i]-iv, "To The | Reader."—dated 4 June 1776.; v-viii, "The | Author's Preface, | To The | Theoretical and Practical Part.;" [ix]-xv, "Contents | Of | Metallurgical Chymistry.;" [1 pg], Blank.; [1]-381, Text.; [382], "Errata.;" [383]-416, "The | Index.;" [At end], Plates.

PLATES: The title of the large folding table is: "A Table which shews how different bodies dissolve one another." It along with the four folding plates are all signed "Jn.^o Lodge sculp." The plates consist of Tab. I showing various chemical apparatus, and Tabs. II-IV, illustrating cross-sections of various furnaces. John Lodge (DIED: London(?), England, 4 April 1796) English copper engraver. Produced many portraits. Ref: Thieme, U. & Becker, F. (1907-50): 23, 311.

VERY SCARCE. Translation by John Seiferth [*fl.* 1775] from the first volume only of *Anfangsgründe zur metallurgischen Chymie* (Leipzig, 1751-5). This remarkable and highly valued work is one of the most comprehensive textbooks written in the 18th century. It provides interesting details on many theoretical and practical subjects related to mineralogy and chemistry. Gellert wrote it partially as a duty of his office as assayer in Freiberg and partially because no other treatise sufficiently covered its subject. The text is divided into 2 parts. The first concerns theoretical matters and includes what is essentially a textbook of mineralogy, including discussions of minerals in general, and the classification of species into Earths, Stones, Salts, Phlogiston, Metals, Semi-Metals, Ores and Mineral Earths and Waters. Other theoretical sections describe chemical agents such as fire, air, water and earth, chemical apparatus, and chemical manipulation derived

from numerous previous authors. Practical considerations are covered in the second part of the text. Here 97 experiments are described in detail, and events such as the extraction of salts and solutions from vegetables, manufacture of nitre, salt ammoniac, vitriol, alum and various acids are covered. Throughout the entire work, Gellert has infused the text with practical observations based on his own experience.

REFERENCES: Bolton, *Bibliography of Chemistry*, 1893: 1, 473. • Cole, *Chemical Literature*, 1988: no. 516. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 242. • Ferchl: 178. • NUC: [NG 0106663]. • Partington, *History of Chemistry*, 1961-70: 2, 710. • Roller & Goodman, *Catalogue*, 1976: 1, 451.

1844. — German, 1795 [Sale catalog].

Verzeichniß der Foßilien des Mineralienkabinetts des verstorbenen Herrn Bergraths und Oberhüttenverwalters Gellert welche den 23. November dieses Jahrs und folgende Tage ... einzeln gegen baare Zahlung in dem ehemaligem Gellertschen Hause auf dem Peterskirchhofe allhier öffentlich verauktionirt werden sollen. Freyberg, Gerlach, 1795.

8°: [2], 98 p.

RARE. Sale catalog of Gellert's mineral and fossil collections.

REFERENCES: Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 55. • Weber, W., "The geoscience collections of the Freiberg Mining Academy," *Mineralogical Record*, 23 (1992), 255-60. • Wilson, *History of Mineral Collecting*, 1994: 212.

GENSSANE, Antoine de.

REFERENCES: Poggendorff: 1, col. 873.

1845. — French, 1770-6.

Traité de la Fonte des Mines par le Feu du charbon de terre, ou Traité de la construction & usage des Fourneaux propres à la fonte & affinage des Métaux & des Minéraux par le feu du charbon de terre, avec la manière de rendre ce charbon propre aux mêmes usages auxquels on emploie le charbon de bois. Paris: Chez Vallat-la-Chapelle, 1770-1776.

2 vols. [VOL 1: 1770] 4°: lxviii (Dédicace, Discours préliminaire, Préface, Extrait des Registres de l'Académie Royale des Sciences), 326 p., 33 plates. [VOL 2: 1776] 4°: viii, 504 p., 42 plates.

VERY SCARCE. The author was a director of the mines of Languedoc, dealer of the Mines of Alsace and the County of Burgundy and correspondent of the Royal Academy of Sciences. This work is an important treatise on mining and metallurgy that is fully illustrated. Genssane also describes the metals and minerals recovered from the mines.

REFERENCES: BL. • Quérard, *France Littéraire*, 1964: 1, p. 314.

1846. — French, 1776-9.

Histoire | Naturelle | De La Province | De Languedoc, | Partie Minéralogique | Et Géoponique. | Avec un Règlement instructif sur la manière | d'exploiter les Mines de Charbon de Terre. | Le tout publiè par Ordre de Nosseigneurs

GENTH

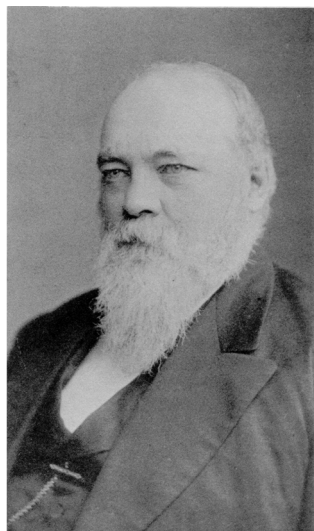
des | États de cette Province. | Par M. de Genssane, | [...5 lines of titles and memberships...] | Tome Premier, | Comprenant les Diocèses de Nîmes, d'Uzès, | d'Alais, de Montpellier & de Beziers. | [ornate rule] | [...3 lines of quotation signed "Plin. Hist. Lib 33°. In Precem."...] | [ornate rule] | [ornament] | A Montpellier, | Chez Rigaud, Pons, & Compagnie, Libraires, | Rue de l'Alguillerie. | [ornate rule] | M. DCC. LXXVI.

5 vols. [VOL 1: 1776] 4°: 288 p., folding table. [VOL 2: 1776] 4°: 267 p., folding table. [VOL 3: 1777] 4°: 275 p. [VOL 4: 1778] 4°: ?? p. [VOL 5: 1779] 4°: ?? p.

RARE. A large and comprehensive topographical work describing the natural history of the ancient region of Languedoc in south central France. Since the author was principally interested in mineralogy, mining and geology, much of the volumes are devoted to these subjects. It includes a general table of the various minerals of Languedoc, coal, iron, copper, iron, lead, silver, gold, antimony mines, marbles, gypsum, clay, slate, etc.

Contents: T.1, comprenant les diocèses de Nîmes, d'Uzès, d'Alais, de Montpellier & de Béziers; T.2, comprenant les diocèses de Narbonne, S. Pons, Lodève & le Gévaudan. Le tout précédé d'un discours sur l'histoire du règne minéral; T.3, comprenant les diocèses du Vivarais, du Velay, de Castres, de Lavaur & d'Agde. Le tout précédé d'un discours sur l'art d'exploiter les mines; T.4, comprenant les diocèses d'Alet, Mirepoix, Rieux, Saint-Papoul & Carcassonne. Le tout précédé d'un discours sur l'art d'exploiter les mines; T.5, comprenant la suite du diocèse de Rieux, les diocèses de Cominges, Toulouse, Montauban & Albi. - Planches gr.s.c. par Jeanjean. - Extrait du privilège accordé à la Société royale des Sciences de Montpellier. - L'adresse varie selon volumes.

REFERENCES: BL: [236.k.1-5.]. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 37. • LKG: XIV 368. • NUC: [no copy listed]. • Quérard, *France Littéraire*, 1964: 1, p. 314. • Roller & Goodman, *Catalogue*, 1976: 1, 451.



GENTH

GENTH, Frederick August Ludwig Karl Wilhelm.

(BORN: Wächtersbach, Hess-Cassel, Germany, 17 May 1820; DIED: Philadelphia, Pennsylvania, U.S.A., 2 February 1893) *German chemist & mineralogist.*

Genth attended the University of Marburg, 1845-1848. Thereafter he emigrated to the U.S.A., finding employment as a mining geologist throughout much of his career. In 1872, he became professor of chemistry at the University of Pennsylvania. He remained there until 1888. He was appointed the chief chemist and mineralogist of the second Pennsylvania Geological Survey. Genth's research focused on rare minerals and meteorites, and he eventually described 23 new mineral species. He advertised his mineral collection for sale, but this was eventually given, bequeathed or purchased by Pennsylvania State University.

REFERENCES: ABA: I 604, 17-22. • Adams, *Dictionary of American Authors*, 1904: 144. • *American Chemists & Chemical Engineers*: 1, 168-9 [by W.D. Miles]. • *American Journal of Science*: Series 3, 45, 257-8. • Barr, *Index to Biographical Fragments*, 1973: 96. • *Biographical Memoirs of the National Academy of Science*: 4 (1902), 201-31, portrait. • Cleavelly, *World Palaeontological Collections*, 1983: 126. • Conklin, L.H., "Portrait Gallery: Frederick A. Genth," *Matrix*, 1 (1988), no. 5, 76, portrait. • DAB: 4, pt. 1, 209-10. • DBA: II 438, 38-41. • DSB: 5, 349-50 [by G.B. Kaufmann; other refs.]. • Myers, W.M. and S. Zerkoff, "Frederick Augustus Genth, 1820-1893. Chemist-mineralogist-collector," *Journal of the Franklin Institute*, 241 (1946), 341-54, portrait. • *National Cyclopaedia of American Biography*: 7, 493. • Poggendorff: 3, 506-7 & 4, 490. • *Proceedings of the American Academy of Arts & Sciences*: 28 (1893), 393-4. • *Proceedings of the American Philosophical Society*: 40 (1901), preface, p. x-xii, portrait. • Sarjeant, *Geologists*, 1980: 2, 1076-7. • Schürmann, K., *200 Jahre Hessisches Mineralien-Kabinet 1790-1990. Festschrift*. Marburg, 1990: 16. • WBI. • *World Who's Who in Science*: 643.

1847. — English, 1875.

Second Geological Survey Of Pennsylvania. | 1874. | [rule] | Preliminary Report | On The | Mineralogy Of Pennsylvania | By | F.A. Genth. | [rule] | With An Appendix | On The | Hydrocarbon Compounds, | By | Samuel P. Sadtler. | [rule] | Harrisburg: | Published by the Board of Commissioners | [...one line...] | 1875.

8°: [4], v-206 p., folding topographical map by J. Peter Lesley. **VERY SCARCE.**

REFERENCES: BL: [W37/4297]. • Dana's 7th (Bibliography): 71.

1848. — English, 1885.

The Minerals | And | Mineral Localities | Of | North Carolina, | Being Chapter I, Of The Second Volume Of The | Geology Of North Carolina. | [rule] | Reprinted by Order of the Board of Agriculture. | [rule] | Raleigh: | P.M. Hale, State Printer and Binder. | 1885.

8°: [1]-128 p. **PAGE SIZE:** 216 x 134 mm.

CONTENTS: [1-2], Title page, verso "Presses of | E.M. Uzzell | Raleigh, N.C."; [3]-93, Text (=Descriptive mineralogy of North Carolina minerals.); [94], Blank.; 95-128, "Synopsis | Of | Minerals And Mineral Localities By Counties."

SCARCE. Co-authored with W.C. Kerr, who was State Geologist of North Carolina, this is a

description of minerals found in that state, reprinted as a separate book from volume two of the larger *Geology of North Carolina*. The first section gives a descriptive mineralogy of North Carolina minerals, while the remainder of the text provides a "synopsis of minerals and mineral localities by counties".

REFERENCES: NUC.



ÉTIENNE FRANÇOIS GEOFFROY

GEOFFROY, Étienne François. (BORN: Paris, France, 13 February 1672; DIED: Paris, France, 6 January 1731) *French apothecary & chemist.*

Geoffroy was the fifth generation of a prominent family of Parisian apothecaries that extended back to 1584. He learned the trade from his father, and was further inspired by the many scientists that visited the family residence. He attended the University in Montpellier where he attended courses at the medical school without matriculating. Returning to Paris in 1694, he became a master apothecary, later turning his attention to the study of medicine. He earned the bachelor's degree in Paris in 1702, and eventually graduated M.D. at Paris in 1704. This was followed by a succession of positions at a number of institutions around Paris: 1707, demonstrator at the Jardin du Roi. 1709-1731, professor of medicine at the Collège Royal. 1712, lecturer in chemistry at the Jardin du Roi. 1712-1730, professor of chemistry at the Jardin du Roi. 1715, pensionnaire chemist the the Académie. 1726/7-1728/9, dean of the Paris Faculty of Medicine.

REFERENCES: ABF: I 446, 295-312. • *Catalogue of Portraits of Naturalists*: 473 [3 portraits listed]. • DBF: 15, 1134-5. • Dorveaux, P., "Étienne-François Geoffroy," *Revue d'Histoire de la Pharmacie*, 2 (1931), 118-26. • Feller, *Biographie Universelle*, 1851. • Fontenelle, B. de, "Éloge de M. Geoffroy," in: *Histoire de l'Académie royale des sciences for 1731*, (publ. 1733), p. 93-100. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 873-4. • Schaedler, *Biographisch Handwörterbuch*, 1891: 40. • WBI.

1849. — English, 1736.

A | Treatise | of the | Fossil, Vegetable, and Animal Substances. | That are made Use of in | Physick. | Containing | The History and Description of them; | with an | Account of their several Virtues and Preparations. | To which is Prefixed, | An

Enquiry into the constituent | Principles of Mixed Bodies, | and | The proper Methods of Discovering the | Nature of Medicines. | [rule] | By the late Steph. Fr. Geoffroy, M.D. | [...3 lines of titles and memberships...] | Translated from a Manuscript Copy of the | Author's Lectures, read at Paris. | [rule] | By G. Douglas, M.D. | [double rule] | London: | Printed for W. Innys and R. Manby, the West End of | St. Paul's; T. Woodward, between the two Temple | Gates, Fleet-street; and C. Davis, in Pater-noster Row. | [rule] | M DCC XXXVI.

8°: A⁸ b⁴ B-Cc⁸; [i]-xxiv, [1]-387, [13] p., index. Page 140 as '40.'

CONTENTS: [i-ii], Title page, verso blank.; [iii]-xii, "Preface."; [xiii]-xxiv, "The Contents."; [1]-387, Text.; [13 pgs], "The Index."

VERY RARE. This work is a translation and first appearance of a portion of the lectures on materia medica given by Geoffroy at the College Royal in Paris. Also included is an abbreviated version of Fontenelle's *Eloge* (1st ed., Paris, 1731).

Other editions: Latin translation, Paris, 1741, 3 vols. Also, Venice, 1742, 1756-60 and 1791.

REFERENCES: BL: [958.c.8.]. • Cole, *Chemical Literature*, 1988: no. 517. • Edelstein, *Catalog of the History of Chemistry*, 1981: 970. • *English Review*. • LKG: XVII 86. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 1603. • NLM 18th Century Books (Blake): 172. • NUC: [NG 0126356]. • Partington, *History of Chemistry*, 1961-70: 3, 50. • Roller & Goodman, *Catalogue*, 1976: 1, 452 [other editions]. • Wellcome Catalog (Books): 3, 105.

1850. — Latin, 1742-56 [First edition].

Tractatus de materia medica.sive de medicamentorum simplicium, Historia, virtute, delectu & usu.Tomus primus: De fossilibus, & de vegetabilibus exoticis, Tomus secundus: De vegetabilibus indigenis; Supplementum Tractatus de materia medica. Tomi secundi pars altera: De vegetabilibus indigenis, virtute, delectu, & usu autore Stephano-Francisco Geoffroy. Venetiis, Apud Nicolaum Pezzana, 1742-1756.

3 vols. [VOL 1: 1742] 8°: [12], 608 p. [VOL 2: 1756] 8°: [2], xx, 362 p. [VOL 3: 1756] 8°: [6], 442 p.

VERY SCARCE. Edited by E. Chardon de Courcelles. An elog to Geoffroy authored by Bernard Le Bovier de Fontenelle [1657-1757] is contained at the beginning of volume one.

Volume contents: Vol 1. De Fossilibus. Vol 2. De Vegetabilibus Exoticis. Vol 3. De Vegetabilibus Indigenis.

REFERENCES: BL: [958.b.11-13.].

1851. French transl., 1743: *Traité | De | La Matière Médicale | Ou | De L'Histoire, | Des Vertus, Du Choix | Et De L'Usage | Des Remèdes Simples. | Par M. Geoffroy, Docteur en Médecines de la | [...5 lines of titles and memberships...] | Traduit en François par M*** Docteur | en Médecines. | Tome Premier. | Contenant la Minéralogie. | [ornament] | A Paris, | Chez Jean De Saint & Charles Saillant, | rue saint Jean de Souavain. | [double rule] | M. DCC. XLIII. | Avec Approbation, & Privilège du Roy.*

7 vols. [VOL 1] 12°: 95 p.; 546, [5] p. [VOL 2] 12°: [VOL 3] 12°: [VOL 4] 12°: [VOL 5] 12°: [VOL 6] 12°: [VOL 7] 12°: 478, [7] p. PAGE SIZE: 165 x 100 mm.

RARE. Translation by the physician Antoine Bergier [c1704-1748] of *Tractatus de Materia Medica* (3 vols., Venetiis, 1742-56). The first volume of which contains Geoffroy's descriptions of minerals used in pharmacy. Included are discussions of the chemical relationships between various substances, and the use in simple remedies of a diverse group of minerals, such as gold, azurite, calcite, talc, mineral waters, various precious and semiprecious stones, etc.

Volume contents: Vol 1. La Mineralogie (preceded by an elege to M. Geoffroy by M. de Fontenelle, pp. 9-17). Vols 2-4. *Traité des Vegetaux*, Section I. Des Medicaments Exotiques. Vols 5-7. *Traité des Vegetaux*, Section II. Des Plantes de Notre Pays.

REFERENCES: BL. • NUC.

1852. German transl., 1761: Abhandlung von der Materia medica oder von der Kenntniß, der Kraft, der Wahl und dem Gebrauch einfacher Arzneymittel ... aus dem Lateinischen und Französischen übersetzt. Nebst einer Vorrede D. Christian Gottlieb Ludwigs ... Leipzig, bey Carl Ludwig Jacobi. Leipzig, bey Christian Gottlob Hilschern, 1760-65

8 parts. [Part 1: 1760] 8°: 232, 464, [4] p. (Von den Fossilien). [Part 2: 1761] 8°: 1188 p. (Von den ausländischen Pflanzen). [Part 3: 1761] 8°: [8], 1286 p. (Von den inländischen Pflanzen). [Part 4: 1762] 8°: [14], 506 p. (Von den inländischen Pflanzen). [Part 5: 1763] 8°: 450, [4] p. (Von den inländischen Pflanzen). [Part 6: 1763] 8°: [8], 882 p. (Von den Thieren). [Part 7: 1764] 8°: 769, [4] p. (Von den Thieren). [Part 8: 1765] 8°: 353, 164 p. (Von den vierfüßigen Thieren).

RARE. *Tractatus de materia medica* Anmerkung: [Aus dem Lateinischen und Französischen übersetzt].

Christian Gottlieb Ludwig *1709-1773*

REFERENCES: BL.

GEOLOGICAL SOCIETY OF LONDON.

Founded 1807.

1853. — English, 1846 [First edition].

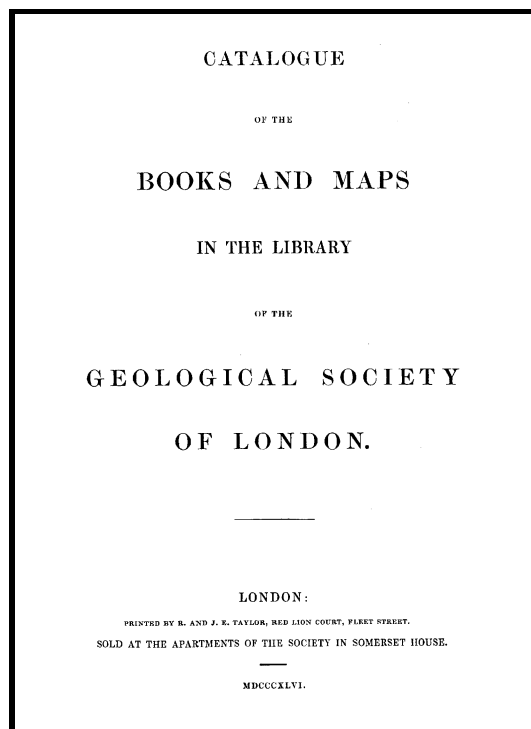
Catalogue | Of The | Books And Maps | In The Library | Of The | Geological Society | Of London. | [rule] | London: | Printed By R. And J.E. Taylor, Red Lion Court, Fleet Street. | Sold At The Apartments Of The Society In Somerset House. | [rule] | MDCCCXLVI.

8°: [i]-xv, [1], [1]-225, [1] p. PAGE SIZE: 230 x 142 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Library Regulations."; [v], "List Of Books, | of which one Copy is always to be kept in the Library | for Reference."; [vi], Blank.; [vii]-ix, "Preface."; [x], Blank.; [xi]-xv, "Contents."; [1 pg], Blank.; [1]-202, Text.; 203-205, "Addenda."; [206], Blank.; [207]-225, "Index Of Reference | To | Authors And Places."; [1 pg], "Printed By Richard And John E. Taylor."

RARE. This is the first published catalog of the library of the Geological Society of London. It is a classified listing journals, geological books, miscellaneous subjects, and maps. It was updated over the course of 35 years by the publication of supplemental volumes, until a new comprehensive catalogue was printed in 1881 [which see below].

Supplement, 1856: *Supplemental catalogue of the Books, Maps, Sections, and Drawings in the library of the Geological Society of London.* London, 1856. [BL shelfmark,



CATALOGUE, 1846

11900.d.12.]

Supplement, 18 :

Supplement, 1863: *Third Supplement-Catalogue of the library of the Geological Society of London ... 1860-63.* London, 1863. [BL shelfmark, 823.g.47*.]

REFERENCES: BL: [W33/7061]. • Bridson, *History of Natural History*, 1994: Bc232.

1854. — English, 1881.

Catalogue of the library of the Geological Society of London. Compiled ... by James Dallas ... London, Geological Society, Taylor & Francis for the Geological Society, 1881.

8°: 618 p.

RARE. Compiled by James Dallas. This is an author catalog of the materials contained in the Library of the Geological Survey of London, which at the time had one of the greatest geological literature holdings in the world.

Supplements, 1895-1935: *Geological Literature Added to the Geological Society's Library. July-December 1894 (-1934).* London. 37 annual volumes. [USGS, R042.2 G293g.]

REFERENCES: BL: [W38/9651]. • BMC: 2, 658. • Bridson, *History of Natural History*, 1994: Bc232. • Margerie, *Bibliographies Géologiques*, 1896: no. 1711. • NUC. • USGS *Library Catalog*.

The History of the Geological Society of London by Horace B. Woodward. (London, 1907).

See: Woodward, Horace Bolingbroke.

GEORGE L. ENGLISH & CO. *American mineral dealing firm.*

See: English, George Letchworth.

GEORGE, Russell D.

1855. — English, 1913.

Common Minerals and Rocks their Occurrence and Uses. Denver, Colo., Smith-Brooks Printing Co., State Printers, 1913.

8°: 406 p., illus. Published as *Colorado State Geological Survey Bulletin 6*. VERY SCARCE.
REFERENCES: NUC.



GEORGI

GEORGI, Johann Gottlieb. (BORN: Gut Wachholzhausen, Pommern, Germany, 31 December 1729; DIED: St. Petersburg, Russia, 27 October 1802) *German apothecary.*

Georgi established an apothecary in Stendal, but moved his establishment in 1770 to St. Petersburg. Using this as a home base he made many explorations in the Russian territory. In 1783, he was elected a member of the Academy of Science in St. Petersburg.

REFERENCES: ADB: 8, 713-4. • Berg, *Russischen Geographischen Entdeckungen*, 1954: 261-3. • *Catalogue of Portraits of Naturalists*: 473 [1 portrait listed]. • DBA: I 380, 385-391; II 439, 160-161. • *Deutsche Apotheker Biographie*: 1, 198-200. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • *Great Soviet Encyclopedia*: portrait. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Moliavko, *Geologi Biograficheskii*, 1985: p. 75. • NDB: 6, 242-3. • Poggendorff: 1, col. 876. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: p. 119. • Walden, P., "Der Apotheker als Kulturträger," *Pharmaz. Zeitung*, 75 (1930), 1323-??. • WBI.

1856. — German, 1775.

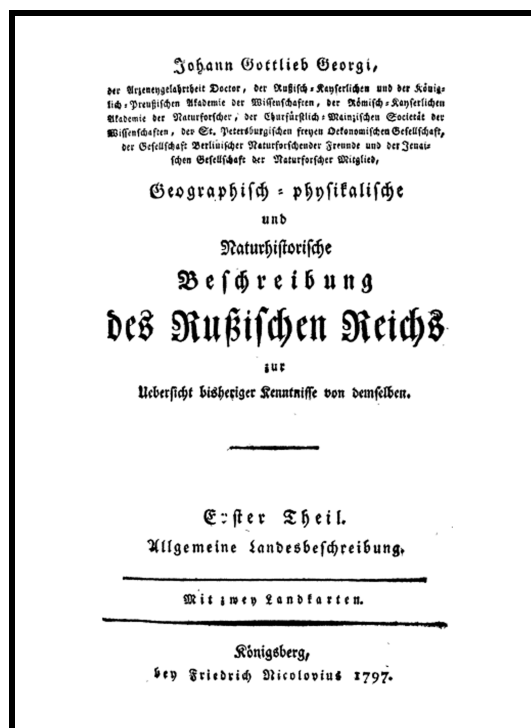
Bemerkungen | einer | Reise | im | Rußischen Reich | Im Jahre 1772 | von | Joh. Gottl. Georgi, | Mitgl. der Berl. Naturforschenden Gesellschaft. | [rule] | Erster Band. | [rule] | [ornate rule] | St. Petersburg. | Gedruckt bey der Kayserl. Academie der Wissenschaften 1775.

2 vols. [VOL 1] 8°: [14], 506 p., 6 plates, one map. [VOL 2] 8°: [2], [507]-920 p.

RARE. Georgi participated in academic expeditions to explore the Russian Empire. His travel account

contains information on the ethnology, economy, biology and geology of the areas visited. The first volume includes a detailed map of Lake Baikal. During the 1772 journey, Georgi worked alongside the ailing Johan Peter Falck, who committed suicide in Kazan in 1774. The second volume continues with his journey with Peter Simon Pallas from Irkutsk to Ekaterinburg, across the Urals, and back to St. Petersburg in 1773-74. Special emphasis is placed on the mines and foundries of the Perm region.

REFERENCES: BL: [981.g.8.].



GEOGRAPHISCH=PHYSIKALISCHE, 1797

1857. — German, 1797-1802.

Johann Gottlieb Georgi, | [...6 lines of titles and memberships...] | Geographisch=physikalische | und | Naturhistorische | Beschreibung | des Russischen Reichs | zur | Uebersicht bisheriger Kenntnisse von demselben. | [rule] | Erster Theil. | Allgemeine Landesbeschreibung. | [rule] | Mit zwey Landkarten. | [tapered rule] | Königsberg, | bey Friedrich Nicolovius 1797.

4 vols. in 13 parts. [VOL 1: 1797] 4°: [1]-374 p., 2 maps. [VOL 2, part 1: 1798] 4°: [1]-286 p. [VOL 2, part 2: 1799] 4°: [289]-800 p. [VOL 2, part 3: 1799] 4°: [801]-992 p. [VOL 2, part 4: 1799] 4°: [993]-1142 p. [VOL 3, part 1: 1798] 4°: [1]-84 p. [VOL 3, part 2: 1798] 4°: [85]-344 p. [VOL 3, part 3: 1798] 4°: [345]-600 p. [VOL 3, part 4: 1800] 4°: [609]-1072 p. [VOL 3, part 5: 1800] 4°:

GERHARD

[1073]-1462 p. [VOL 3, part 6: 1800] 4°: [1463]-1678 p. [VOL 3, part 7: 1801] 4°: [1679]-2222 p. [VOL 4: 1802] 4°: [1]-444 p.

CONTENTS: [Teil 1] [1-2], Title page, verso blank.; [3]-14, "Vorrede."; [15], Sectional title page, "Einleitung."; [16], Blank.; [17]-25, "Inhalt und Plan des Werkes zu dessen Uebersicht."; 26-31, "Maß, Gewicht und Münzen."; [32]-47, "Benutzte Schriftsteller und Hülfquellen."; [48]-74, "Zur Geschichte der physikalischen und naturhistorischen Kenntniß des Russischen Reichs."; [75], Sectional title page.; [76], Blank.; 77-374, Text.

[Teil 2, Abt. 1] [1-2], Title page, verso blank.; [3]-9, "Vorerinnerungen."; 10, "Inhalt | der ersten Abtheilung."; 11-286, Text.

[Teil 2, Abt. 2] [289-290], Title page, verso blank.; [291], Sectional title page.; [292], Blank.; [293]-294, "Vorerinnerung."; 295-296, "Inhalt | der zweyten Abtheilung."; 297-800, Text.

[Teil 2, Abt. 3] [801-802], Title page, verso blank.; [803], Sectional title page.; [804], Blank.; 805-806, "Inhalt | der dritten Abtheilung."; 807-808, "Vorerinnerung."; 809-992, Text.

[Teil 2, Abt. 4] [993-994], Title page, verso blank.; [995], Sectional title page.; [996], Blank.; 997-998, "Inhalt | der vierten Abtheilung."; 999-1000, "Vorerinnerung."; 1001-1142, Text.

[Teil 3, Abt. 1] [1-2], Title page, verso blank.; 3-6, "Vorrede."; [1 pg], Sectional title page.; [1 pg], Blank.; [7]-8, "Inhalt des ersten Bandes des dritten | Theils."; [9]-10, "Vorerinnerung."; [11]-83, Text.; [84], Blank.

[Teil 3, Abt. 2] [85-86], Title page, verso blank.; [87], Sectional title page.; [88], Blank.; [89]-96, "Inhalt des zweyten Bandes des dritten | Theils."; [97]-102, "Vorerinnerung."; [103]-344, Text.

[Teil 3, Abt. 3] [345-346], Title page, verso blank.; [347], Sectional title page.; [348], Blank.; [349]-353, "Vorerinnerung."; [354]-358, "Inhalt."; 359-607, Text.; [608], Blank.

[Teil 3, Abt. 4] [609-610], Title page, verso blank.; [611], Sectional title page.; [612], Blank.; [613]-638, "Vorerinnerung."; [639]-1072, Text.

[Teil 3, Abt. 5] [1073-1074], Title page, verso blank.; [1075]-1461, Text.; [1462], Blank.

[Teil 3, Abt. 6] [1463-1464], Title page, verso blank.; [1465]-1468, "Vorerinnerung."; [1469]-1677, Text.; [1678], Blank.

[Teil 3, Abt. 7] [1679-1680], Title page, verso blank.; [1681]-1686, "Vorerinnerung."; [1687], Sectional title page.; [1688], Blank.; 1689-2222, Text.

[Teil 4] [1-2], Title page, verso blank.; [3]-10, "Vorrede."; [11], Sectional title page.; [12], Blank.; [13]-444, Text.

RARE. REWORK COMMENTARY: The chief work of the author, one of the most prolific among the numerous German scholars who studied the Russian empire under Pallas. The first volume contains the descriptions of the waters and mountains, as well as the overview and sources for the complete work.

Contained in Theil one (1797) is a history of the physical and natural history of the Russian empire, "Zur Geschichte der physikalischen und naturhistorischen Kenntniß des Russischen Reichs" (pp. 48-74).

Contained in Theil one (1797) is a history of mining and mine processing in the Russian empire, "Zur Geschichte des Russischen Bergbaues und Hüttenwesens" (pp. 103-110, 135-137, 161-166, 181-195, 203-204 and 222-231).

Contents: Teil 1. Geographisch-physikalische und naturhistorische Beschreibung des Rußischen Reichs zur

Uebersicht bisheriger Kenntnisse von demselben. Teil 2, Abt. 1. Beschreibung der einzelnen Gouvernements. Teil 2, Abt. 2. Beschreibung der einzelnen Gouvernements. Teil 2, Abt. 3. Beschreibung der einzelnen Gouvernements. Teil 2, Abt. 4. Systematische Anzeige bisher bekannt gewordener Wasserarten. Teil 3, Abt. 1. Vorhandene Mineralien. Teil 3, Abt. 2. Inländische Mineralien. Teil 3, Abt. 3. Inländische Pflanzen der ersten bis dreyzehnten Klasse des Systems des Ritters Carl von Linné. Teil 3, Abt. 4. Inländische Pflanzen der vierzehnten bis letzten Klasse des Systems des Ritters Carl von Linné. Teil 3, Abt. 5. Bisher bekannt gewordene Thierarten. Teil 3, Abt. 6. Bisher bekannt gewordene Thierarten. Teil 3, Abt. 7. Geographisch-physikalische und naturhistorische Beschreibung des Rußischen Reichs zur Uebersicht bisheriger Kenntnisse von demselben. Teil 4. Nachträge. Geographisch-physikalische und naturhistorische Beschreibung des Rußischen Reichs zur Uebersicht bisheriger Kenntnisse von demselben.

REFERENCES: Berg, *Repertorium Literatur Mineralogie*, 1862: p. 8. • BL: [978.1.3-7.]. • LKG: XIV 771.

GERHARD, Carl Abraham. (BORN: Lerchenbrunn near Liegnitz, Germany, 26 February 1738; DIED: Berlin, Germany, 9 March 1821) *German physician*.

Gerhard was an advisor on finance and war to the Prussian court in Berlin from 1786 onwards. He was also appointed commissary for the administration of mines and smelting works, becoming in 1779 councillor for mining. Gerhard was a member of the Academie der Wissenschaften in Berlin.

REFERENCES: ADB. • Bielefeldt, Erika. "Carl Abraham Gerhard — ein Berliner Geologe der Aufklärung", *Zeitschrift für geologischen Wissenschaften*, 8 (1980), no. 2, 207-15, one illus. • DBA: I 383, 59-75; II 440, 369-374. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • Lambrecht & Quenstedt, *Catalogus*, 1938: 159. • Poggendorff: 1, cols. 880-1. • WBI.

1858. Dissertation, 1760: Disquisitio physico-chymica granatorum Silesiae atque Bohemiae. Francofurti ad Viadrum, Typis J.C. Winter, [1760]. 4°; 44 p.

VERY SCARCE. Gerhard's dissertation[?]

REFERENCES: BL: [B.379.(7.)]. • LKG: XVI 289.

1859. — German, 1773-6.

D. Carl Abraham Gerhard, | [...3 lines of titles and memberships...] | Beiträge | zur | Chymie und Geschichte | des | Mineralreichs. | [rule] | Erster Theil. | [rule] | [vignette] | [rule] | Berlin 1773. | bei Christian Friedrich Himburg.

2 vols. [VOL 1: 1773] 8°: [6], 394 p., title vignette, one engraved folding plate of mineral specimens. [VOL 2: 1776] 8°: [4], 300 p., 5 large folding plates of apparatus.

VERY SCARCE. First edition of this scarce encyclopaedia of all known minerals and a comprehensive treatise of mineralogy. - Carl Abraham Gerhard (1738-1821) was the founder and professor of mineralogy and mining sciences at the Berlin Mining Academy (Berliner Bergakademie). He rose to privy councillor for finance, war, and crown lands in Prussia and later became commissary for the administration of mines and smelting works and was appointed councillor for mining in 1779. A member of many scientific societies, Gerhard wrote chiefly on mineralogy, but he also considered geology, medicine, botany, natural history, and chemistry. He devised in 1786 a new mineralogical system, outlined in

Grundriss des Mineralsystems zu Vorlesungen in which he stressed chemical composition. - A polymath and a collector, Gerhard built an important collection of minerals and other curiosities of nature. These were deposited in the Academy in 1781 in return for a pension. They formed the core of the Academy's holdings, were extensively used, and were generously supplemented by other collectors. Today, his minerals and his archive are preserved in the Berlin Institute for Mineralogy.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 23, 285 & 31, 249. • *Beckmann P.Ö.B.*: 7, 588. • BL: [1034.k.12.]. • *Freilich Sale Catalog*: no. 205. • *Gatterer, Mineralogischen Literatur*, 1798-9: 1, 285. • Hoover Collection: no. 343. • LKG: VI 54.

1860. — German, 1779.

Beobachtungen und Muthmassungen über den Granit und über den Gneiss. Berlin, C.F. Himburg, 1779.

8°: 55 p.

VERY SCARCE. Published anonymously. Deals with the origins of granite and gneiss, a subject that caused controversy between Buffon, Breislak, Hutton and Werner, and their respective followers from the late eighteenth to the early nineteenth century.

REFERENCES: Hoover Collection: no. 344. • LKG: XIII 143. • NUC: [no copy listed].

1861. — German, 1781-2.

D. Carl Abraham Gerhard, | [...6 lines of titles and memberships...] | Versuch | einer | Geschichte | des | Mineralreichs. | Erster Theil. | [ornament] | Mit X Kupfertafeln. | [double rule] | Berlin, 1781. | bey Christian Friedrich Himburg.

2 vols. [VOL 1: 1781] 8°: [i]-xxxx, 302 p., title vignette, 10 plates (folding; 7 hand-colored). [VOL 2: 1782] 8°: viii, 424 p.

SCARCE. Volume one provides descriptions of the properties of minerals, theories on the internal structure of the earth, techniques for locating mineral veins, etc. Volume two explains Gerhard's system of mineral classification, which was based on the previous systems of Bergman, Born, Werner, Wallerius and Cronstedt. Following this is a descriptive mineralogy listing the minerals according to Gerhard's classification.

REFERENCES: Adams, *Birth and Development*, 1938: p. 315. • *Beckmann P.Ö.B.*: 11, 458. • BL: [990.f.17.]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 311. • *Freilich Sale Catalog*: no. 206. • *Gatterer, Mineralogischen Literatur*, 1798-9: 1, 28. • Jonathan Hill, Bookseller: cat. 28, no. 49. • LKG: XII 84.

1862. Russian transl., 1790: Opyt poviesti o tsarstvii iskopayemykh K.A. Gergarda, Korolevskago Prusskago Tainago gornago Soviethnika, Korolevskoi Berlinskoi Akademii Nauk i Rimsko-Imperatorskoi Akademii ispytatelei prirody, Frankfurtskago Obshchestva lyubiyashchikh nauki, Rossiyskago Imperatorskago Vol'nago Ekonomicheskago Obshchestva, Shlezskago Patrioticheskago Ekonomicheskago i Gallskago Obshchestva ispytyvaiushchikh prirodu, Chlena; s 10 chertezhami; perevedena s Niemetskago E.B.D.M. Sanktpeterburg : pri Imperatorskoi Akademii Nauk, 1790. 8°: xix, 264, 11 p. VERY SCARCE.

REFERENCES: *Svodnyi Katalog Russkoï Knigi*: no. 1395.

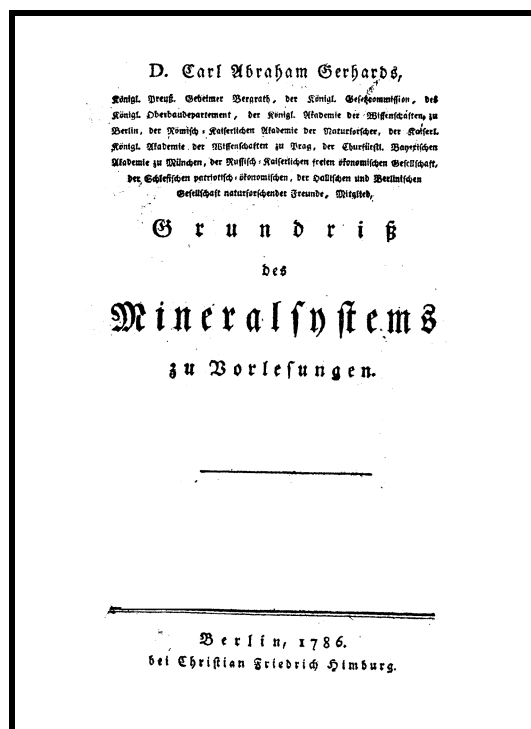
1863. — German, 1788.

D. Carl Abraham Gerhard, Königl. Preussl. Geheimer Ober- ... Rath ... Abhandlung über die Umwandlung und über den Uebergang einer Erd- und Stein-Art in die andere. Berlin, Bei Wilhelm Vieweg dem Jüngern, 1788.

8°: [2], 129 p., engraved title vignette.

VERY SCARCE. Concerns the effects of heat on various minerals, stones and soils.

REFERENCES: BL: [973.a.17.]. • LKG: XIII 143a*. • NUC: [no copy listed].



GRUNDRISS DES MINERALSYSTEMS, 1786

1864. — German, 1786 [First edition].

D. Carl Abraham Gerhards, | [...7 lines of titles and memberships...] | Grundriß | Des | Mineralsystems | zu Vorlesungen. | [rule] | [double rule] | Berlin, 1786. | bei Christian Friedrich Himburg.

8°: π^4 A-T⁸ U⁶; 162 ℓ .; [8], [1]-310, [2] blank, [4] p., one folding table. PAGE SIZE: 202 x 115 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [6 pgs], "Vorrede."; [1]-310, Text.; [2 pgs], Blanks.; [4 pgs], "Inhalt."; [At end], One folding table.

VERY SCARCE. This is Gerhard's introduction to his new mineralogical system. After a short introduction that provides definitions and an overview of the classification system, the descriptive mineralogy is presented. This system divides the minerals into four classes: Earths and Stones, Salts, Inflammable Minerals and Metals. It is based in part on the theories of

GERMAR

Werner and it stresses the chemical composition of a mineral species to determine its placement within the classification. Three appendices follow the descriptive mineralogy. The first on pages 281–287 deals with newly discovered species and those minerals not yet fully described. The second on pages 287–291 covers petrifications and fossils, while the third pages 291–310 is concerned with volcanic ejecta and basalt. The folding table at the end provides a general list of physical properties for various mineral groups.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 92-3. • BL: [970.i.8.]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 311. • *Freilich Sale Catalog*: no. 207. • LKG: XII 85a.

1865. 2nd edition, 1797: Grundriss eines neuen Mineralsystems ... Erste Theil. Berlin, W. Vieweg, 1797.

8°: xviii, 438 p.

VERY SCARCE. No other parts published. An enhanced edition of *Grundriss des Mineralsystems zu Vorlesungen*. (1786).

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 311. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 31. • *Göttingische gelehrte Anzeigen*: July, 1797, 1120 ["Sehr gut"]. • LKG: XII 86b. • Roller & Goodman, *Catalogue*, 1976: 1, 454.

1866. — German, 1803.

Abhandlungen über technologische, mineralogische und Finaux-Gegenstände ... Berlin, 1803.

8°: VERY SCARCE.

REFERENCES: BL. • LKG: VI 55a.

1867. — German, 1779.

Beobachtungen und Muthmaßungen über den Granit und über den Gneiß. Berlin, Himbürg, 1779.

8°: 55 p., title page woodcut vignette.

VERY SCARCE. Erste Ausgabe dieser seltenen mineralogischen Schrift. - Holzmänn-B. VI, 2258. - Der schlesische Bergbeamte und Mineraloge C. A. Gerhard (1738-1821) schuf im Auftrag Friedrich des Großen 1770 nach Freiburger Vorbild die Bergakademie Berlin, als deren Leiter er selbst mineralogischen und bergwerkswissenschaftlichen Unterricht erteilte. Er galt als "ausgezeichneter Kenner des Bergbaues" (NDB VI, 275). - Leicht gebräunt und etw. stockfleckig.

GERMAR, Ernst Friedrich. (BORN: Glauchau, in Schönbürgischen, ??, 3 November 1786; DIED: Halle, Germany, 8 July 1853) *German mineralogist*.

Germar was professor (extra., 1816, ordinary, 1823) of mineralogy at the University of Halle. He was also the director of the mineralogical cabinet of that institution.

REFERENCES: ADB. • DBA: I 385, 41-43; II 442, 297-299. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Lambrecht & Quenstedt, *Catalogus*, 1938: 159. • NDB: 6, 310-1 [by M. Pfannenstiel]. • Poggendorff: 1, col. 885. • Sarjeant, *Geologists*, 1980: 2, 1081. • WBI.

1868. — German, 1812.

Reise durch Österreich, Tyrol nach Dalmatien, vorzüglich in naturhistorischer Hinsicht. Leipzig, 1812.

8°:

VERY RARE. No more published.

REFERENCES: BL. • LKG: XIV 254. • NUC: [no copy listed].

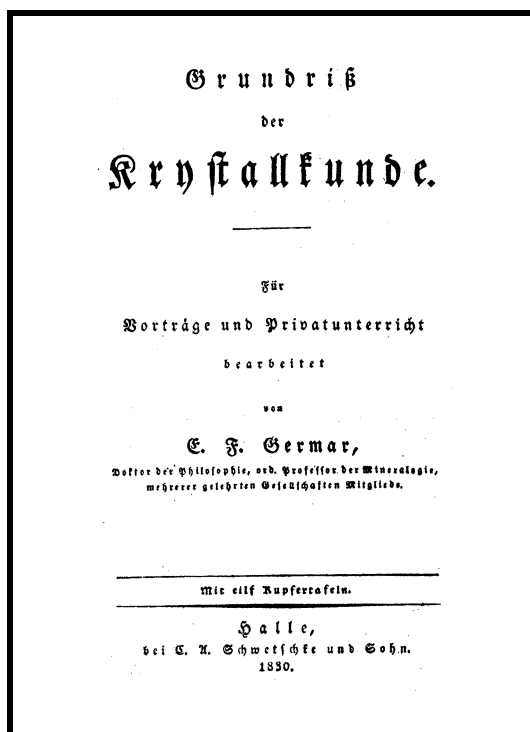
1869. — German, 1817.

Reise nach Dalmatien und in das Gebiet von Ragusa von Ernst Friedrich Germar, Dokt. der Philos., auss. Prof. der Mineral. und Direkt. der akadem. Miner. Samml. zu Halle, der naturf. Ges. zu Halle, der ökon. Soc. zu Leipzig, der mineral. Societäten zu Jena und Dresden, der Wetterausch. naturf. Ges. und der Societ. für Forst- und Jagdkunde zu Dreyssigacker Mitglied oder Ehrenmitglied. Mit 9 illum. Kupfern und 2 Charten.. Leipzig und Altenburg, Brockhaus, 1817.

8°: xii, 323 p., 9 hand-colored plates, 2 colored maps.

VERY SCARCE. Second edition [?] of *Reise durch Österreich, Tyrol nach Dalmatien, vorzüglich in naturhistorischer Hinsicht* (1812).

REFERENCES: BL: [10205.d.6.].



GRUNDRIS DER KRYSTALLKUNDE, 1830

1870. — German, 1830.

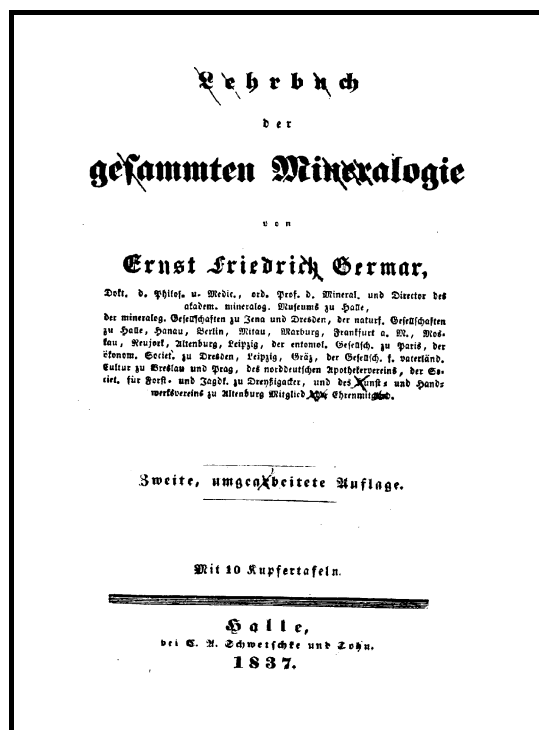
Grundriß | der | Krystallkunde. | [rule] | Für | Vorträge und Privatunterricht | bearbeitet | von | E.F. Germar, | Doktor der Philosophie, ord. Professor der Mineralogie, | mehrerer gelehrten Geseüschaften Mitgliede. | [rule] | Mit elf Kupferafn. | [tapered rule] | Halle, | bei C.A. Schwetschke und Sohn. | 1830.

8°: π^4 1-188; 148 ℓ .; [i]-viii, [1]-286, [2] p., 11 folding plates (numbered I-XI; crystal diagrams). PAGE SIZE: 180 x 102 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Vorbericht.;" [vii]-viii, "Inhalt.;" [1]-286, Text.; [1 pg], "Verbesserungen.;" [1 pg], "Halle, | gedruckt in der Gebauerschen Buchdruckerei.;" [At end], 11 folding plates.

SCARCE. The first portion gives an introduction to the science of crystallography, the laws of formation, twins, pseudomorphs, etc. The next section of the text provides a rather detailed explanation of each crystal system, i.e. Tesseral, Pyramidal, Prismatisches, and Hexagonal. The final sections give specific examples from the mineral kingdom of species that fall within a particular system.

REFERENCES: BL: [726.c.37.]. • Roller & Goodman, *Catalogue*, 1976: 1, 455.



LEHRBUCH, 1837

1871. — German, 1837.

Lehrbuch | der | gesammten Mineralogie | von | Ernst Friedrich Germar, | [...9 lines of titles and memberships...] | [rule] | Zweite, umgearbeitet Auflage. | [rule] | Mit 10 Kupfertafeln. | [ornate rule] | Halle, | bei C.A. Schwetschke und Sohn. | 1837.

8°: π^4 1-318 324; 256 ℓ .; [i]-vi, [2], [1]-500, [4] p., 10 folding plates (crystal drawings). PAGE SIZE: 178 x 104 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii-iv], "Vorrede."—signed E.F. Germar, 1 January 1837.; [2 pgs],

"Inhalt.;" [1]-472, Text.; [473]-500, "Register.;" [1 pg], "Berichtigungen.;" [1 pg], "Halle | gedruckt in der Gebauerschen Buchdruckerei.;" [2 pgs], Publisher's list.; [At end], 10 folding plates.

VERY SCARCE. Second edition. The first edition appeared in 1824 as *Neue Ausgabe von Meinecke's Lehrbuch herausgegeben von E.F. Germar*. See under: Johann Ludwig Georg Meinecke.

A through introduction to mineralogy, geology and paleontology. The text is divided into six sections, i.e. introduction, physical characteristics, systematic mineralogy, geognosy, petrifications, and history and literature.

REFERENCES: BL: [973.c.28.].

GERSAINT, Edme François. (BORN: Paris, France, 1694; DIED: Paris, France, 24 March 1750) *French antiquarian, art collector & dealer.*

On Gersaint's marriage in 1718 to Marie-Louise Sirois [1698-1725] he came within the circle of Antoine Watteau's closest friends and this determined his future life. Just prior to his marriage, Gersaint had purchased the stock and business of the painter and dealer Antoine Dieu; however, a few days after he took possession, the building and its contents were destroyed by fire. Although this must have been a set back, Gersaint continued and through his connections with the artists of Paris was quickly able to build his stock back up. He soon became one of the best known art dealers of the eighteenth century. By the early 1730's, Gersaint had developed interests in shells, minerals, lacquer and porcelain. He made several journeys during the 1730s to the Netherlands in search of stock. This resulted in a series of catalogues of the curiosities, as well as prints and drawings, which he offered for sale. Gersaint took an early interest in the etchings of Rembrandt, of which his catalogue raisonné was published posthumously in 1751.

REFERENCES: ABF: I 450, 301-302. • *Biographie Universelle*: 16, 341-2. • Dacier, E., J. Hérold & A. Vuafart, *Jean de Jullienne et les Graveurs de Watteau*. Paris, 1921-9. • DBF: 15, col. 1353 [by A. Reinbold]. • *Dictionary of Art*: 12, 489. • Duverger, E., "Réflexions sur le Commerce d'Art au XVIIIe Siècle," *Stil und Überlieferung in der Kunst des Abendlandes*, 3 (Berlin, 1967), p. 65-88. • Glorieux, G., *À l'enseigne de Gersaint. Edme-François Gersaint, marchand d'art sur le Pont Notre-Dame, 1694-1750*. Préface de Daniel Roche. Seyssel, Champ Vallon; Paris, Diffusion, Presses universitaires de France, 2002. viii, 585 p., illus. [ISBN, 2876733447; Biography of Gersaint]. • McClellan, A., "Edme Gersaint and the Marketing of Art in Eighteenth-Century Paris," *Eighteenth Century Studies*, 29 (1995-6), no. 2, 439-53. • *Nouvelle Biographie Générale* (Hoefer): 20, cols. 273-4. • Pomian, K., *Collectors and curiosities: Paris and Venice 1500-1800*. Translated by Elizabeth Wiles-Portier. Cambridge, U.K., Polity Press; Cambridge, Mass., Basil Blackwell, 1990. [1]-348 p. [Translation of: *Collectionneurs, amateurs et curieux* (Paris, 1987). ISBN: 0745606806.]: 163-94. • Préaud, M., et al., *Dictionnaire des Éditeurs d'Estampes à Paris sous l'Ancien Régime*. Paris, 1987. • WBI.

1872. — French, 1736.

Catalogue | Raisonné | De Coquilles, | Et | Autres Curiosités | Naturelles. | On a joint à la tête du Catalogue quelques | Observations générales sur les Coquilles, avec | une Liste des principaux Cabinets qui s'en trou- | vent, tant dans la France que dans la Holan- | de; Une autre Liste des Auteurs les plus ra- | res qui ont traité de cette matiere, & une Ta- | ble Alphabétique des Noms arbitraires, tant



CATALOGUE, 1736

| François que francisés, attribués aux Coquil- | les par les Curieux. | [ornament] | A Paris, | Chez [The next 4 lines braced on the left by a “{”:] Flahault, au Palais, Galerie | des Prisonniers. | Prault, Fils, Quay d: Con- | ty à la Charité. | [rule] | M. DCC. XXXVI. | Avec Approbation & Privilège.

8°: vii, 167, [5] p., frontispiece (arrangement of corals and shells; designed by Duflos, engraved by Boucher; identical to the frontis of the 1744 *Catalogue*).

RARE. Ostensibly a sale catalog of the author’s natural history collection, but actually a pocket-size introduction to conchology. It contains some observations on shells, a list of the principle cabinets of shells in France and Holland, and at pages 30-45 a bibliography of the more important conchological titles. It was published after the author had returned to Paris from an extended trip throughout Holland. Although principally on shells, the list of cabinets contains some useful information for the history of mineralogy as it pertains to the natural history cabinets.

REFERENCES: Barbier: 1, 626. • BL: [444.a.44.]. • Dance, *Shell Collecting*, 1966: p. 39. • Laissus, *Cabinets d’Histoire Naturelle*, 1964: 671. • Murray, *Museums*, 1904: 2, 254. • NUC: 197, 289-90 [NG 0170134]. • *Thesaurus Librorum Conchyliorum*, 1999: no. 147.

1873. — French, 1737 [Sale catalog].

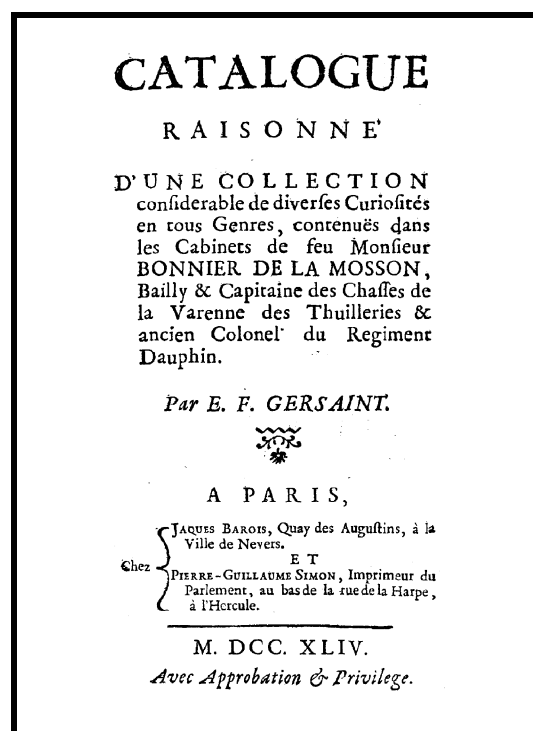
Catalogue | D’Une Collection | considérable de Curiositez de diffe- | rens genres dont la Vente doit com- | mencer le Lundi 2 Decembre 1737. | à deux heures après midi, chez | Gersaint Marchand Pont Notre- | Dame. | Ces Curiositez consistent en un très-grand | nombre d’Estampes d’après les plus grands | Maîtres, des mieux conditionnés; des Desseins; une grande quantité de Coquil- | lages rares; des Madrepores & autres Plan- | tes marines; des Animaux dans des phio- | les; des Minéraux; des Papillons étrangers; | de très-belles Pierres arborisées; des Pago- | des de diverses formes, &

autres Ouvrages | variés de Porcelaine; des Tasses & Boîtes | d’anciens Vernis; quelques Pierres antiques, montées & non montées; de Figures en | cire très-finies, & autres Curiositez & pro- | ductions de la Nature & de l’Art. | Ce Catalogue se vend | A Paris, | Chez Prauit fils, Quay de Conty, vis-à-vis | la descente du Pont-neuf, à la Charité. | [rule] | MDCCXXXVII. | Ou y trouve aussi le Catalogue de la Vente de 1736.

12°: [8], 64 p., one plate (signed Hérisset).

RARE. The author’s description of his own natural history cabinet, which included minerals. This collection was sold to Quentin de Lorangère which was later (1744) catalogued by Gersaint and sold.

REFERENCES: BL: [958.a.12.(2.)]. • Laissus, *Cabinets d’Histoire Naturelle*, 1964: p. 672. • NUC: 197, 289-90 [NG 0170132].



CATALOGUE RAISONNÉ, 1744

1874. — French, 1744 [Sale catalog].

Catalogue | Raisonné | D’une Collection | considérable de diverses Curiosités | en tous Genres, contenues dans | les Cabinets de feu Monsieur | Bonnier De La Mosson, | Bailly & Capitaine des Chasses de | la Varenne des Thuilleries & | ancien Colonel du Regiment | Dauphin. | Par E.F. Gersaint. | [ornament] | A Paris, | Chez [The next 6 lines braced on the left by

a {:] Jaques Barois, Quay des Augustins, à la Ville de Nevers. | Et | Pierre-Guillaume Simon, Imprimeur du | Parlement, au bas de la rue de la Harpe, | à l'Hercule. | [rule] | M. DCC. XLIV. | Avec Approbation & Privilege.

12°: π^1 a⁶ b² A-T⁶ V⁴; 126 ℓ .; [2], j-xij, [3], [1]-234, [2] p., frontispiece (arrangement of corals and shells; designed by Duflos, engraved by Boucher; identical to the frontis of the 1736 *Catalogue*). PAGE SIZE: 160 x 85 mm.

CONTENTS: [Frontispiece]; [2 pgs], Title page, verso blank.; j-xij, "Avertissement."; [1 pg], "Approbation."; [2 pgs], "Table | Des differens Cabinets & des | divers genres de Curiosités | contenuës dans ce Catalogue."; [1]-234, Text.; [2 pgs], "Avis" & "Errata."

VERY RARE. Comté Joseph Bonnier de la Mosson [see note below], a wealthy amateur, was the owner of one of the most famous collections of natural history objects and scientific instruments. This sale catalog lists 966 lots with brief descriptions, including illustrated books and works of art. Among the different sections of the scientific collections may be mentioned the following: Cabinet d'Anatomie (pages 1-4), Cabinet de Chimie ou Laboratoire (pages 5-16), Cabinet de Pharmacie (pages 11-18), the natural history cabinet containing mostly minerals (pages 54-82), and the Cabinet de Mécanique et de Physique (pages 83-172), in which 222 scientific instruments and machines are listed and described in detail, including descriptions of many microscopes and a whole treatise on telescopes (pages 116-20).

Comté Joseph Bonnier de la Mosson. (BORN: Montpellier, France, 6 September 1702; DIED: Paris, France, 26 July 1744) *French financier, patron and collector*. In 1726 Bonnier resigned from a successful military career in order to succeed his father as treasurer for the États du Languedoc. Bonnier divided his time between Paris and Montpellier. He built a very large collection of natural history objects, including minerals. A major portion of this accumulation was ultimately acquired by the Natural History Museum in Paris.

REFERENCES: BL: [1485.k.2.(1.)]. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: 672. • Lugt, *Repertoire des Catalogues*, 1938-53: no. 614. • NUC: 197, 289-90 [NG 01700133]. • Wilson, *History of Mineral Collecting*, 1994: 61, 161 & 205. (Bonnier de la Mosson) Bourdier, F., "L'Extravagant cabinet de Bonnier," *Connaissance des Arts*, 1959, 52-60. • Cotinat, S., "Un cabinet parisien d'histoire naturelle, vendu aux enchères sous Louis XV," *Revue d'Histoire de la Pharmacie*, 1959, no. 163, 177-83, 4 plates. • *Dictionary of Art*: 4, 331 [by T. Bajou]. • Grasset-Morel, *Les Bonnier, ou une Famille de Financiers au XVIIIe Siècle*. Paris, 1886. • Roland-Michel, M.-A., "Le Cabinet de Bonnier de la Mosson et la Participation de Lajoüe à son décor," *Bulletin Société A. François*, 1975, 211-21.

1875. — French, 1744 [Sale catalog].

Catalogue Raisonné des Diverses Curiosités du Cabinet de feu M. Quentin de Lorangère. Composé de Tableaux Originaux des Meilleurs Maîtres de Flandres; d'une Très-Nombreuse Collection de desseins & d'estampes de toutes les écoles; de plusieurs atlas & suites de cartes; de quantité de morceaux de topographie, & d'un coquillier fait

avec choix.... [Avec] quelques courtes notes sur les principaux maîtres anciens & modernes dont on n'avoit rien dit dans le courant du catalogue, ainsi que sur leurs ouvrages. Paris, Jacques Barois, 1744.

12°: xviii, [4], 294, [2], 96 p., frontispiece (gentlemen viewing the collection designed and engraved by Cochin).

RARE. Auction catalog of Quentin de Lorangère [see note below]. The sale took place 2 March 1744 and days thereafter. This is one of the most important catalogs prepared by the prolific Gersaint and is innovative in several ways. Besides the substantial descriptions of the collection objects, he has included biographies of several artists. In addition, the catalog also includes the most complete list of the work of the French artist and engraver, Jacques Callot [1592-1635], including prints not included in the sale.

The collection was notable for its fine paintings, drawings and prints. The drawings were mainly Dutch and Flemish, including numerous landscapes, or French. Also included were a group of almost 500 drawings by Claude Gillot. The prints represented a comprehensive survey of the Northern, Italian and French schools. Also included in this catalog are his collections of illuminations, books, shells, corals, atlases and maps, and natural history objects including a few minerals.

Quentin de Lorangère. (BORN: ; DIED: Paris, France?, before March 1744) *French patron & collector*. French art patron and collector. Quentin is only known through the sale of his collections, which began in Paris on 2 March 1744. He had been a collector for some time, as Gersaint records that he had sold his own extensive shell collection to Quentin in 1737.

REFERENCES: BL: [1044.b.26.]. • *Dictionary of Art*: 25, 815. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: 672. • Lugt, *Repertoire des Catalogues*, 1938-53: no. 590. • NUC: 197, 289-90 [NG 0170146]. (Lorangère) *Dictionary of Art*: 25, 815.

1876. — French, 1745 [Collection catalog].

Catalogue | Raisonné | Des Différents Effets | curieux & rares contenus dans le | Cabinet de feu M. Le Chevalier | De La Roque. | Ce Cabinet renferme une Collection considérable de | Tableaux, de Desseins et d'Estampes des meilleurs Maîtres; de Figures de Bronze & de Marbre; de Porcelaines anciennes; de Lacqs de toute espèce; de Diamans; de Pierres fines de toutes les couleurs; de Pierres gravées en creux & en relief, montées en bague ou autrement, & non montées; de Coquilles, & enfin de nombre d'autres morceaux interessans de diverse genres. | Par E.F. Gersaint. | [ornament] | A Paris, | Chez [The next 4 lines braced on the left by a "{":] Jaques Barois, Quay des Augustins, à la | Ville de Nevers. | Et | Pierre- à l'Hercule. | [rule] | M. D. CC. XLV. | Avec approbation & privilege.

12°: [a]-b⁶ A-B⁴ A-X⁶ Y³; 147 ℓ .; XX, 14, [2], 258 p., frontispiece (group of connoisseurs examining

GERSAINT

objects; engraved by Cochin). PAGE SIZE: 166 x 98 mm.

VERY SCARCE. Collection catalog of M. le Chevalier de La Roque's [see note below] collections. La Roque was enthusiastic for the visual arts as expressed in his eclectic collection, which is described in some detail in this sales catalogue. Gersaint was among his circle of friends and he has written a fine catalogue of the collections. In addition to paintings, there are also described line drawings, prints, bronzes, sculptures, porcelain, lacquer, diamonds, semi-precious stones, engraved gems, shells, corals, books, and maps. Many of the 300 pictures are the product of Dutch and Flemish masters including several by Rubens and Rembrandt. The precious stones, agates, engraved gems and coral are described on pages 109-162. Included are diamonds, rubies, sapphires, emeralds, topaz, oriental amethyst, turquoise, opal, etc.

Chevalier Antoine de la Roque. (BORN: Marseille, Franch, 1672; DIED: Paris, France, October 1744) *French dramatist, journalist & poet.* French soldier, dramatist, journalist, poet and collector. La Roque was the son of a family of successful merchants, and travelled widely in France and abroad, including Constantinople and the Levant. He fought in the War of the Spanish Succession, losing a leg at the Battle of Malplaquet (1709), for which he was awarded a pension by Louis XIV. He knew many artists and writers, having himself composed several operas. In 1721 he became associated with the semi-official periodical, *Merure de France*, of which he became owner and publisher in 1724.

REFERENCES: BL: [958.a.13.]. • Laissus, *Cabinets d'Histoire Naturelle*, 1964: 673. • Lugt, *Repertoire des Catalogues*, 1938-53: no. 619. • NUC: 316, 493 [NL 0104455]. • Sinkankas, *Gemology Bibliography*, 1993: no. 2362. (Roque) *Dictionary of Art*: 18, 796 [by H. Guicharnaud]. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hofer). • WBI.

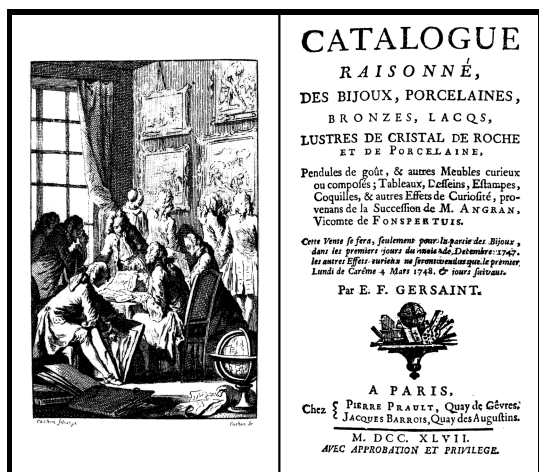
Meubles curieux | ou composés; Tableaux, Dessens, Estampes, | Coquilles, & autres Effets de Curiosité, pro- | venans de la Succession de M. Angran, | Vicomte de Fonspertuis. | Cette Vente se fera, seulement pour la partie des Biojoux, | dans les premiers jours du mois de Decembre 1747, | les autres Effets curieux ne seront vendus que le premier | Lundi de Carême 4 Mars 1748. & jours suivans. | Par E.F. Gersaint. | [ornament] | A Paris, | [Next two lines braced on the left side with "Chez {":] Pierre Prault, Quay de Gèvres, | Jacques Barrois, Quay des Augustins. | [rule] | M. DCC. XLVII. | Avec Approbation Et Privilege.

8°: a⁸ b² A-Bb⁸ Cc¹ a⁴ b⁸ c⁴ d⁸ e⁴; 187ℓ.; [i]-xii, [1]-306, [i]-lv, [1] p., frontispiece (engraved, signed Cochin).

CONTENTS: [Frontispiece]; [i-ii], Title page, verso "Listed | Des Catalogues | Dressés par E.F. Gersaint ..."; [iii]-xvi, "Avertissement."; ix-x, "Table | Des Differens Genres | de Curiosités contenues dans | ce Catalogue."; xi-xii, "Avis."; [1]-306, Text.; i-xlvi, "Supplement."; [xlix]-lv, "Table | Alphabetique."; [1] pg, Blank.

VERY SCARCE. Another of Gersaint's auction catalogs, this one concentrating on a large collection assembled by M. Angran, Vicomte de Fonspertuis, of bronzes, porcelains, paintings, etc., with a somewhat minor natural history component. The auction took place on the 4 March 1748 and successive days. The frontispiece is reused from Gersaint's other catalogs.

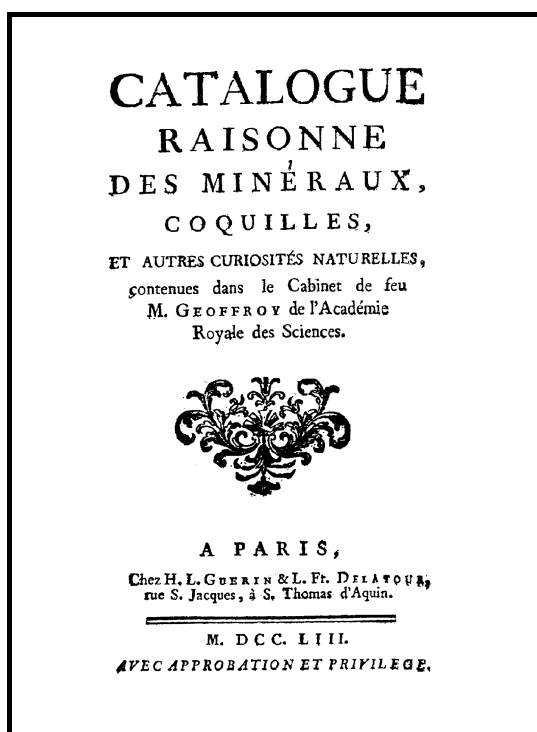
REFERENCES: BL.



CATALOGUE, 1747

1877. — French, 1747 [Sale catalog].

Catalogue | Raisonné, | Des Bijoux, Porcelaines, | Bronezes, Lacqus, | Lustres De Cristal De Roche | et de Porcelaine, | Pendules de goût, & autres



CATALOGUE RAISONNÉ, 1753

1878. — French, 1753 [Sale catalog].

Catalogue | Raisonné | Des Minéraux, | Coquilles,
| Et Autres Curiosités Naturelles, | contenues dans
le Cabinet de feu | M. Geoffroy de l'Académie |
Royale des Sciences. | [ornament] | A Paris, | Chez
H.L. Guérin & L.Ft. Delatour, | rue S. Jacques, à
S. Thomas d'Aquin. | [double rule] | M. DCC. LIII.
| Avec Approbation Et Privilege.

8°: viii, 94, [2] p.

VERY RARE. Posthumous auction sale catalog of Claude-Joseph Geoffroy's [see note below] natural history cabinet, listing 597 lots of minerals, crystals, petrifications, shells, corals, and other curiosities of nature, which was one of the more important 18th century cabinets. According to Lugt, the sale took place after 5 February 1754 and following days. Since this catalogue appeared several years after Gersaint's death, it is likely that it was prepared years before and updated by Geoffroy as new objects were added. "Les Pétrifications, les Pierres fines, & les Crystaux forment une belle suite; mais surtout celle des Mines est très riche, & l'on y reconnaît le goût du Possesseur de ce Cabinet, pour la Minéralogie et la Chymie" (Preface).

Claude-Joseph Geoffroy. (BORN: Paris, France, 8 August 1685; DIED: Paris, France, March 1752) *French botanist & chemist.* Geoffroy was born into an important family of Parisian apothecaries, which is the profession he followed. Through his profession he became a competent botanist and when chemistry attracted his attention, he pursued the study with intensity. He was elected a member

to the class of chemistry in the Royal Academy of Sciences in Paris on 7 December 1715.

REFERENCES: BL. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 271. • Gersaint, *Catalogue Raisonné de Coquilles*, 1736: p. 31. • Lugt, *Repertoire des Catalogues*, 1938-53: no. 825. • Murray, *Museums*, 1904: 2, 253. • NUC: [no copy listed]. • Wilson, *History of Mineral Collecting*, 1994: 172 & 212. (Geoffroy) ABF: I 446, 279-289; II 294, 71. • DBF: 15, cols. 1132-3 [by A. Tétty]. • Dorveaux, P., "Claude-Jean Geoffroy," *Revue d'Histoire de la Pharmacie*, 3 (1932), 113-22. • DSB: 5, 351-2 [by W.A. Smeaton]. • Grandjean de Fouchy, J.-P., "Éloge de M. Geoffroy," *Histoire de l'Académie Royale des Sciences*, 1756, 153-64. • *Nouvelle Biographie Générale* (Hoefler). • Planchon, P., "La Dynastie des Geoffroy Apothicaires à Paris," *Journal de Pharmacie et de Chimie*, 8 (1898), 289-93 & 337-45. • WBI.

GESNER, Abraham. (BORN: Cornwallis Township, Nova Scotia, 1797; DIED: Halifax, Nova Scotia, 29 April 1864) *Canadian geologist.*

Early on Gesner developed an interest in geology. After he studied medicine in London, he returned to Parrsboro, Nova Scotia, setting up a medical practice and in his spare time he collected fossils from the area. It is said Gesner often gathered specimens on his way to and from house calls, and built up an extensive collection. In 1838, he became the first government geologist in a British colony when appointed Provincial Geologist of New Brunswick. In an effort to combat a serious personal debt, in April 1842 he opened the first museum in Canada, "Gesner Museum", where he charged admission to view his private collection. His creditors eventually took over his collection in lieu of payment, however. In 1890, it was acquired by the Natural History Society of New Brunswick and added to the New Brunswick Natural History Museum in St John as the core of the museum. Gesner then immigrated to the United States where he developed and patented a process for manufacturing kerosene, for which he is still famous. Gesner was invited back to Dalhousie University, Nova Scotia, as a professor of chemistry, but died shortly thereafter.

REFERENCES: ABA: I 606, 143-152. • *Appleton Encyclopedia of American Biography*. • *Dictionary of Canadian Biography*. • Drake, *Dictionary of American Biography*, 1872. • Poggendorff: 3, 510. • WBI.

1879. — English, 1836.

Remarks | On The | Geology And Mineralogy | Of
| Nova Scotia | By Abraham Gesner, Esq. | [rule] |
[...7 lines of text...] | [rule] | Halifax, Nova Scotia. |
[ornament] | Printed By Gossip And Coade, Times
Office, Halifax, Nova Scotia. | 1836.

8°: xl, 272, [2] p., one folded lithographed frontispiece, one folded handcolored geological map and one lithographed plate.

CONTENTS: [2 pgs], Title page, verso blank.; [i-ii], Dedication to Viscount Valentia, signed Abraham Gesner, 1836.; iii-xxii, "Preface."—signed Abraham Gesner, July, 1836.; [xiv]-xxviii, "Introduction | To The | Study Of Geology."; xxix-xl, "Introduction | To The | Study Of Mineralogy."; [1 pg], Blank.; [Map, folding.]; [1]-265, Text.; [266], "Errata."; [267]-272, "Index."

SCARCE. The first serious and methodical survey of the geological and mineralogical resources of Nova Scotia. Gesner, a surgeon who wrote on geological subjects, did much if not all of the footwork for this study himself. Gesner includes both commercial subjects such as clays and coals, granites, marbles, copper and such, and also semi-precious stones and

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gems. The nicely colored map was not originally planned for- "It was not intended, when the Prospectus of this Work was written, to give a Geological Map of the Province, or any pictorial illustrations of its scenery; but from the general support the book has received, a map has been prepared, at a considerable additional expense.". He divides the country into four districts and discusses each in turn, as well as providing a concise introduction to the sciences of geology and mineralogy, including explanations of the competing theories of this still-developing field. Plates: frontispiece of Farrsboro as seen from the harbor, a folding colored map of Nova Scotia, with the tipped-in explanation; a lithographed plate of Cape Split.

REFERENCES: BL: [microfiches no. 35387]. • NUC. • NYPL Catalog. • Roller & Goodman, *Catalogue*, 1976: 1, 456.



GESNER

GESNER, Conrad. (BORN: Zurich, Switzerland, 26 March 1516; DIED: Zurich, Switzerland, 13 December 1565) *Swiss polymath.*

Gesner received a classical education at Strasbourg, Bourges, Paris and Basel. He became professor of Greek, at the University of Lausanne, 1537-40. Gesner furthered his education by studying medicine at Montpellier and Basel, finally receiving his M.D. from the later in 1541. Became lecturer in Zurich, 1546-67, as well as city physician from 1554. Gesner was a Renaissance scholar, who applied himself to medicine, linguistics, theology, bibliography, geology, zoology, and botany. His many and important botanical and zoological publications brought Gesner wide recognition and a reputation as one of the greatest naturalists of the sixteenth century. Gesner's *Bibliotheca Universalis* (Zurich, 1545), that lists all Hebrew, Greek, and Latin books known to him in 20 volumes, earned him the title, "Father of Bibliography."

REFERENCES: ADB: 9, 107. • Barr, *Index to Biographical Fragments*, 1973: 97. • *Catalogue of Portraits of Naturalists*: 475 [14 portraits listed]. • Cleavelly, *World Palaeontological Collections*, 1983: 127. • DBA: I 388, 17-81; II 444, 412-418; 445, 112-123. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1914-22. • DSB: 5, 378-8 [by P.E. Pilet]. • Eitner, *Quellenlexikon*, 1959. • Fischer, H., ed., *Conrad Gessner*

(26.Marz.1516 - 13.Dezember.1565): *Leben und Werk*. Published as, *Neujahrsblatt der Naturforschenden Gesellschaft in Zürich, zur Erinnerung an den 400. Todestag, der 13. Dezember 1565, des Grossen Zürcher Naturforschers, Universalhistorikers und Arztes Conrad Gessner herausgegeben*. Zürich, Leeman, 1966. 152 p., facsimilies. • Fueter, *Grosse Schweizer Forscher*, 1941: 66-8, portrait. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 538-40. • *ISIS*, 1913-65: 1, 481-2. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Lambrecht & Quenstedt, *Catalogus*, 1938: 161. • Ley, W., "Konrad Gesner, Leben und Werk," *Münchener Beiträge zur Geschichte und Literatur*, Heft 15/16 (1929), 162 p., illus. • *Nature and Museum*: 95 (1965), 483-94. • NDB: 6, 342-5 [by E.K. Feuter]. • Poggendorff: 1, cols. 887-8 & 6, ?? • Sarjeant, *Geologists*, 1980: 2, 1083-7, Suppl. 1(1985), 1, 440-1 & Suppl. 2 (1996), 1, 649 [other refs.]. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • WBI. • Wellisch, H., "Conrad Gessner: a bio-bibliography," *Journal of the Society for the Bibliography of Natural History*, 7 (1975), pt. 2, 151-247, 4 text figs. • *World Who's Who in Science*: 648.



DE OMNI RERVm FOSSILIVM GENERE, 1565

1880. — Latin, 1565-6.

De Omni | Rervm Fossi= | livm Genere, Gem-
| mis, Lapidibvs, Metallis, | Et Hvivsmodi, Libri
Ali- | Qvot, Pleriqve Nvnc | Primvm Editi. |
Opera Conradi Gesneri: Quorum Catalo- | gum
sequens folium cominet. | [woodcut ornament, two
finger rings surrounded by twelve numbered cut gems]
| Tiguri, excudebat Iacobus Gesnerus: An- | no M.
D. LXV.

8 parts bound in one volume. 8°: a⁸ A-M⁸ Aa-
Cc⁸ 2a⁸ b-i⁸ α-ε⁸ (α)-(δ)⁸ †α-λ⁸ 2Aa-2Cc⁸ Dd-Yy⁸

(M8 and i8 blank); 176ℓ.; with no page numbers, only signature marks, woodcut illustration on title, numerous woodcuts in text, woodcut printers device on the reverse of the last leaf. PAGE SIZE: 165 x 100 mm.

CONTENTS: Folios: [a1], Title page, verso blank.; a2, "Hoc Volumine | continentur, | ..."; a3r-a5r, "Ornatissimo | Viro, Medico Et Phi- | losopho, Conrado Gesnero, Iohan- | nes Kentmannus Dresdensis, ar- | tium & Medicinæ Do- | ctor, S.D."—dated 8 November 1565.

[A: Kentmann's *Catalogvs Rerum Fossilivm*].; [a5v], Description of the 26 principal classes.; [a6r], Woodcut of mineral cabinet.; [a6v]-[a8r], Title and table of contents.; [a8r], Woodcut ornament showing Kentman's profile.; A1r-M7v, Text.; [M8rv], Blanks.

[B: Kentmann's *Calcvlorvm Qvi In Corpore*].; 2A1rv, Title page, verso blank.; 2A2r-2A2v, "Ornatissimo | Viro, Pietate, Erv- | ..."; 2A3r-2C8r, Text.; 2C8v, Blank.

[C: Fabricius' *De Metallicis Rebus*].; 2a1r, Title page.; 2a1v, Table of contents.; 2a2r-2a3r, Epistola, dated 1566.; 2a3v-2a8v, b1r-d8v, e1r-e2v, Text.

[D: Goebel's *De Succino Libri Duo*].; e3r-e3v, Title page, verso blank.; e4r-e4v, "Reverendissimo Prin- | cipi Ac Domino, Domino | ..."—signed Seuerinus Goebel, 4 March 1558.; e5r-i7v, Text.; i8rv, Blanks.

[E: Cordus' *Simesusii de Halosantho*].; α1rv, Title page, verso blank.; α2r-α4r, Epistola, dated July M.D. LXVI [1566].; α4v-α8v, β1r-ε8v, Text.

[F: Epiphanius' *Sancti Patris Epiphani*].; (α)1rv, Title page, verso blank.; (α)2r-(α)3v, Epistola.; (α)4r, "His scriptis offertur mihi locus di | ..."; (α)4v, "ΤΟΥ ΕΝ ΑΓΙΟΥΣ"; (α)5r-(γ)3r, Text, with Latin on the recto side and Greek on the verso.; (γ)3v, "Corollarivm | Conradi Gesneri | in Epiphanij de XII. gem- | mis libellum."; (γ)4r-(δ)8r, Text of commentary.; (δ)8v, Blank.

[G: La Rue's *De Gemmis Aliquot*].; τ01rv, Title page, verso "Avthores In His | libris citati."; τ02r-τ02v, Table of contents.; τ03r-τ03v, Text.; τ04r-τ08r, "Ad Lectorem."; τ08v-τ17v, Epistola.; τ18r, "Alardvs Rvevs Etiam- | ..."; τ18v, Blank.

[H: Gesner's *De Rerum Fossilivm*].; 2Aa1rv, Title page, verso blank.; 2Aa2r-2Aa5r, "Nobili Viro | D. Andreae Schadco- | uio, salinarum cracouiensium no- | tario, patriæ decori, Conradus | Gesnerus Helvetius | S.D."—dated 1565.; 2Aa5v-2Aa7v, Preface.; 2Aa8r-2Cc8v, Dd1r-Yy8r, Text.; Yy8v, Printer's device.

VERY SCARCE, perhaps rare in complete copies. This very important sixteenth century work is a collection of eight separate tracts most with their own title page by seven authors all edited and several with commentary by Gesner. The volume contains an early illustrated work that deals solely with fossils, metals, minerals, and gems, as well as the earliest catalog of a mineral collection. Therefore, this work had a substantial rôle to play in the development of mineralogy and gemology.

The printing history of this collected work is a difficult bibliographic problem. Each of the included works is known to exist as its own separate volume, including Kentman's *Catalogvs*, which does not have a title page. Furthermore, complete collections of these tracts as described here are a rarity. Usually, defects are present in one or more of the individual works, or sometimes complete sections are absent from the collection. This suggests that the collected volume was assembled from the remaining stock of the various treatises by the publisher. Below are given the details of the individual works that are contained in the volume.

[A]. KENTMANN, Johann.

Catalogvs Rerum | fossilivm Io. Kentmani numerus fo- | lij pvncto præeunte, faciem prio- | rem indicat:sequente, po- | steriorem.

8°: [a5v]-[a8v] A-M⁸; 99.5ℓ.; [3.5], 96 f., last folio blank. The half leave is a result of the work starting on the verso of leave a5.

This early catalog describes the "fossils" or "things dug from the earth" collected by JOHANNES KENTMANN. Although some petrified remains of animal and plants are included in the descriptions, it is essentially a portrait of a fifteenth century mineral collection. This treatise is therefore the earliest work to catalog mineralogical items in their own right.

The text gives a detailed inventory of 1,608 individual specimens, with an unusual feature for the period of providing accurate locality information for each sample described. As would be expected, over 1,100 of the specimens originated from the region around Saxony where Kentmann flourished. Yet a suprising aspect are the 472 specimens described as having come from foreign lands. This indicates the vigor and great expense Kentmann used to acquire material for his ever growing collection. Unfortunately, none of the specimens was illustrated. However, a major novelty of the work was a woodcut illustration of the actual mineral cabinet used to store the collection. The picture shows thirteen drawers that were used to segregate the specimens. This closely follows the method of classification outlined in the text.

The system devised by the author is based principally on the work of GEORG AGRICOLA, but modified and enlarged upon Gesner's insistence. It consists of twenty-six major divisions with headings such as earths, stones, flourites, hard-bodied minerals, marbles, ores of gold, silver, copper and lead, pyrites, antimony, iron, etc. Each division was then subdivided according to the kind of species. For example, this separation included male and female loadstone, which respectively, attracted or repelled iron particles. A good modern translation and analysis of Kentmann's work is provided in Prescher, H., J. Helm and G. Fraustadt, "Johannes Kentmanns Mineralienkatalog, aus dem Jahre 1565," *Abhandlungen des Staatlichen Museums für Mineralogie und Geologie zu Dresden*, 30 (1980), 5-152.

[B]. KENTMANN, Johann.

Calcvlorvm | Qvi In Corpo= | Re Ac Membris Ho- | minum innascuntur, genera XII. | depicta descriptaq3, cum Hi- | storijs singulorum ad- | mirandis: | Per Io. Kentmanvm | Dresdensem Medicum. | [ornament] | Tigvri, 1565.

8°: Aa-Cc⁸; 24ℓ.; [2], 22 f., last page blank, 10 woodcuts.

An early, illustrated tract describing the various stones found in the human body. It is perhaps the first description and illustration of gall and kidney stones.

[C]. FABRICIUS, Georg.

De Metallicis | Rebus Ac | Nominibvs Ob= | servationes Variae | & eruditæ, ex schedis Georgij

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Fabri- | cij: quibus ea potissimum ex- | plicantur,
quæ Georgius | Agricola præ- | terijt. | [ornament]|
Tigvri M.D.LXV.

8°: a-d⁸ e²; 34ℓ.; [3], 31 f.

This short treatise describes the noble and base metals. It consists of eleven chapters that describe gold, silver, lead, copper, tin and the like. Much of Fabricus' commentary is based upon the earlier writings of GEORGIUS AGRICOLA.

[D]. **GOEBEL, Severin.**

De Svccino | Libri Dvo, Avthore | Seuerino
Gœbelio, Medi- | co Doctore. | Horvm Prior Liber
| continet piam commonefactionem, de passio- | ne,
resurrectione, ac beneficijs Christi, | quæ in historia
Succini de- | pinguntur. | Posterior veram de
origine Succini ad- | dit sententiam. | [ornament]|
Tetrastichon in hos libros Conradi | Gesneri Tigurini.
| [...4 lines of text in Greek...].

8°: e-i⁸; 33ℓ.; [2], 31 f., f 30 repeated twice, hence last f should read "31".

One of the earliest treatises on amber containing in its first section strange religious references while the second section describes the origin of amber based upon earlier writers. In the first part, Goebel attributes the many forms, shapes, and inclusions of amber to divine influence and proclaims it to be proof of Christianity. In the second part, he believes amber to be a type of hardened bituminous petroleum, formed inside the earth and subsequently bleed out to the sea floor. Sinkankas (1993) notes other editions appeared in 1566, 1558, 1582 and 1616.

[E]. **CORDUS, Valerius.**

Valerii | Cordi Simesv= | sii De Halosantho | Sev
Spermate Ceti Vvl- | go Dicto, Liber, Nvnc | Primvm
In Lvcm | Æditvs. | [ornament]| Tigvri M. D. LXV.

8°: a-f⁸; 40ℓ.; [3], 37 f.

Cordus' postumous work for which Gesner wrote the preface and commentary. This monograph examines "efflorescences" of salt found floating on the sea, which had come to the notice of ancients Galen and Dioscorides. They prescribed it for relief from skin diseases. Gesner in his commentary which is as long as the treatise itself, refutes the popular belief that these salts were the sperm of whales, and instead attributes the phenomena to salt crystals falling out of the brine solution. A curious medical and mineralogical treatise, with an amusing link to whales.

[F]. **EPIPHANIUS.**

Sancti | Patris E= | piphanii Epi= | scopi Cypri
Ad Dio- | dorum Tyri episcopum, De XII. | Gemmis,
quæ erant in veste Aaronis, | Liber Græcus, & è
regione Latinus, | Iola Hierotarantiano interprete: |
cum Corollario Conra- | di Gesneri. | [ornament]|
Tigvri M. D. LXVI.

8°: (α)-(δ)⁸; 32ℓ.; [4], 28 f., last page blank.

This treatise considers the twelve gemstones contained in the breastplate of Aaron, the High Priest of the Jews and founder of the Jewish priesthood. It is perhaps the earliest printed work to treat the subject,

although many earlier manuscripts existed. It is in the form of a letter from Ephphanius to his friend, Diodorus, Bishop of Tyre, and discusses the jewels set in the breastplate (Exodus 28, 17–20). These stones are: sard, topaz, emerald, carbuncle, sapphire, jasper, lyncurium, agate, amethyst, chrysolite, beryl and onyx. Appended is a short essay describing Biblical mentions of the diamond. Gesner's commentary at the conclusion discusses the stones, with a diagram showing their positions. Sinkankas (1993) for a list of other editions.

[G]. **LA RUE, Francios.**

De Gemmis | Aliqvot, Iis | Præsertim Qvarvm. |
Diuus Ioannes Apostolus in sua Apocalypsi | meminit:
De alijs quoque, quarum vsus hoc | æui apud
omnes percrebruit, Libri duo: Theo | logis non minùs
vtiles quàm Philosophis, & omnino felicioribus ingenijs
periucundi, è non | vulgaribus vtriusque philosophiæ
adytis de- | prompti: authore Francisco Rueo, | Doctore
medico Insu- | lano. | Editio secunda. nam prima
mutila, & in- | scio authore edita fuerat. | [ornament]|
Tigvri M. D. LXV.

8°: †α-†λ⁸; 87ℓ.; [2], 85 f., misnumbered because f2 is repeated.

This lapidary is the second edition of a work first published at Paris in 1547. The first book describes the origin of gemstones, their virtuous properties, the reasons behind their powers citing numerous earlier writers as authorities, but always stressing that God has the ability to impart such phenomena to stones. The second book is descriptive in nature, treating the characteristics and physical and mystical properties of individual gemstones, including jasper, sapphire, ruby, emerald, beryl, topaz, opal, amber, diamond, etc. Thorndike considers the work to be "... a compendium of past lore with little or nothing in the way of personal observation or classification." Sinkankas (1993) provides a description of the other editions.

[H]. **GESNER, Conrad.**

Conradi Gesneri | De Rervm | Fossilivm,
La= | Pidvm Et Gemmarvm | maximè, figuris &
similtudinibus Li- | ber; non solum Medicis, sed
omnibus | rerum Naturæ ac Philologiæ | studiosis, vtiles
& iuncun- | dus futurus. | [ornament]| Cum Gratis &
Priuilegio S.Cæs.Maie= | statis ad annos VII. | Tigvri
M. D. LXV.

8°: Aa-Yy⁸; 176ℓ.; [7], 169 f., last page with printer's device, 72 woodcuts.

This work is especially interesting as presenting a picture of the mineral kingdom as seen from the viewpoint of the greatest naturalist of his time. It marks a deliberate departure from earlier medieval lapidaries in that little or no comment is made of the miraculous virtues attributed to minerals. Instead, Gesner describes the characters by which they may be identified. Gesner writes that this work was written rapidly for his own pleasure and recreation and that a more detailed treatment would follow, so that students would be stimulated and encouraged to study minerals,

fossils and stones. However, Gesner died of plague shortly after this treatise was published, and the larger work never appeared.

Gesner writes that *De Rerum Fossilium* is the first work on its subject to be illustrated by cuts and figures. Adams (1938) notes this is substantially correct, although the four illustrations in CHRISTOPH ENZELT's *De Re Metallica* (1st ed., Frankfurt, 1551) predate it. In addition, the lapidary portions of the early herbals, especially the *Hortus Santias* (1st ed., 1491) were commonly illustrated with cuts, sometimes hand-colored. Gesner's work though is the first to contain such a large number of mineralogical illustrations to facilitate the commentary of the text. He hoped that the illustrations in the book would assist students and then refers to the difficulty which he experienced in giving adequate representations of the minerals and rocks as compared to the animals and plants.

Gesner deviates from almost all previous authors on minerals by presenting his description of minerals not as an alphabetical list, but in a true system of classification. In his numerous other writings on plants and animals, he always attempted to classify natural objects in an organized hierarchy. When his attention was turned to minerals, he faced a difficult problem. There was no well defined and recognized form by which the natural objects from the earth could be classified. Furthermore, the fossilized remains of plants and animals were at the time not differentiated from true minerals. Gesner's solution to the problem was quaint and interesting. He writes in the dedicatory epistle that he was unwilling to adopt an alphabetical arrangement as most earlier writers had done because he considered the method to be trivial. In the present work, he intends to present a method that draws upon the form of the substance being described, which is why the illustrations were included. By this method, the classification will follow in the steps of nature, and will by the same measure reveal her secrets.

First taking the simplest of forms of fossils, or those that resemble lines, angles, circles or allied shapes as seen in the heavens or in the elements, Gesner will pass on to consider forms of ever greater complexity, descending as it were by degrees from heaven to the earth. Using this methodology Gesner's classification consists of 15 distinct classes. Class 1 contain those fossils that suggest points, lines and angles. Included are all transparent and translucent minerals, bodies like pumice whose surface depressions are usually rounded in shape, asbestos, natrolite because of their fibrous nature, quartz, pyrite because of their regular angles. Class 2 consider items whose name is derived from some heavenly body or from one of the Aristotelian elements. Included are moonstone, aquamarine, and opal. Class 3 are those that take their name from something in the sky. This embraces all fossil Echinoderms as well as Neolithic stone axes and other weapons. Class 4 are those named after terrestrial objects, like chrysolite, lead and other metallic ores. Class 5 resemble certain artificial things like belemnites (for darts). Class 6

are artificial items made from metals, stones or gems. Included are mariners compass and lead pencils (first pictured in this work). Class 7 resemble plants and herbs. Class 8 are those that have the form of shrubs, like coral. Class 9 resemble trees or portions of trees, such as petrified wood and coal plants. Class 10 Corals. Class 11 are other sea plants that have become stone. Class 12 bear resemblance to men or four footed animals. Native silver because of its hair like form, hematite carnelian, blood stone because of its similarity to blood. Class 13 consist of stones derived from the names of birds. Class 14 resemble things that live in the sea, such as glossoptera (fossil shark teeth). Class 15 have the form of insects or serpents. Included are ammonites, ophites and others, as well as insects included in amber. Interestingly, Gesner considers those items that resemble the fossilized remains of animals to be just that, while other fossils of less distinct form are not. The observations outlined in this work were derived from Gesner's own keen mind, while the depictions of the various items were probably derived from specimens contained in his own collection.

REFERENCES: Adams, *Birth and Development*, 1938: 176-83, portrait. • Adams, *Cambridge Books*, 1967: G-522. • Beekman, *Systematische Mineralogie*, 1906: 12 & 25. • Dana's 7th (Bibliography): 71. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 1. • Freilich *Sale Catalog*: no. 209. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 6. • Hoover Collection: no. 347. • LKG: III 22. • Murray, *Museums*, 1904: 1 212-3. • NUC: 197, 578 [NG 0178720]. • Prescher, H., et al., "Johannes Kentmanns Mineralienkatalog aus dem Jahre 1565," *Abhandlungen des Staatlichen Museums für Mineralogie und Geologie*, 30, 21-35. • Roller & Goodman, *Catalogue*, 1976: 1, 456. • Rudwick, *Meaning of Fossils*, 1972: 12-4. • Sinkankas, *Gemology Bibliography*, 1993: no. 2366. • Torrens, *Early Collecting*, 1985: 205-6. • Ward & Carozzi, *Geology Emerging*, 1984: no. 907. • Wellcome Catalog (Books): 1, no. 2804. • Wellisch, H., "Conrad Gessner: a bio-bibliography," *Journal of the Society for the Bibliography of Natural History*, 7 (1975), pt. 2, 151-247, 4 text figs. • Wilson, *History of Mineral Collecting*, 1994: 23-5.

1881. — Latin, 1556.

Thesaurus Euonymi Philatri [pseud.] de remediis secretis. Liber physicus, medicus, & partim etiam chymicus, & oeconomicus in vinorum diversi saporis apparatu, medicis & pharmacopolis omnibus praecipuè necessarius. Quem praeter haec quaeantea pr Venetiis, 1556.

567, [41] p. : illus. ; 11 cm. Microfilmed for preservation DNLN. Microfilmed for preservation DNLN. VERY SCARCE.

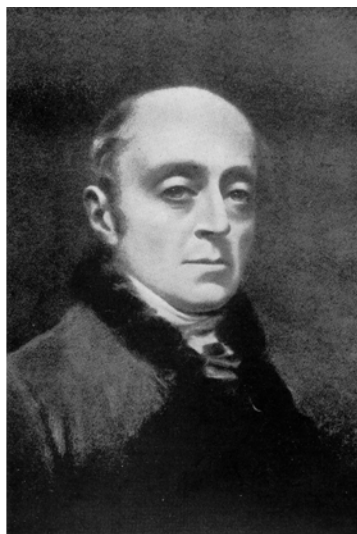
1882. — English, 1599.

The practise of the new and old phisicke : wherein is contained the most excellent secrets of phisicke and philosophie, deuided into foure bookes : in the which are the best approued remedies for the diseases as well inward as outward, of al the parts of Printed at London, : by Peter Short, 1599.

[12], 256 leaves (leaf [12] of 1st group blank) : ill. ; 19 cm. (4to) Translation of: Euonymus : Conradi

GIESECKE

Gesneri ... De secretis liber secundus, the second part of Gesner's *Thesaurus Euonymi Philatri*. First English ed. (1576) has title: *The newe iewell of health*. Translation of: *Euonymus : Conradi Gesneri ... De* VERY SCARCE.



GIESECKE

GIESECKE, Karl Ludwig. (BORN: Augsburg, Germany, 1761; DIED: Dublin, Ireland, 5 March 1833) *German mineralogist, actor & poet.*

Born the son of a craftsman, Giesecke studied for a time in Göttingen, but moved to Vienna and from 1790 to 1804 became a playwright and actor. He is thought by some to be the librettist behind Mozart's last opera, "Die Zauberflöte" (The Magic Flute). He traveled to Copenhagen, and established himself as a mineral dealer. From 1806 to 1813, he explored Greenland collecting minerals, and on his return went to Dublin where he was soon appointed professor of mineralogy at the Royal Academy in Dublin.

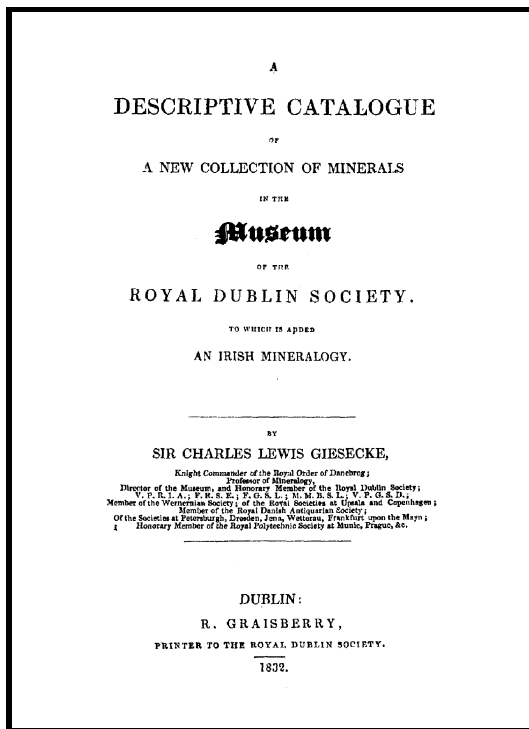
REFERENCES: ADB. • *Annalen der Physik*: **62** (1833), 180. • *Catalogue of Portraits of Naturalists*: 478 [2 portraits listed]. • DBA: I 391, 61-67. • Garboe, *Geologiens Historie i Danmark*, 1959-61: 1, 198-200, portrait. • *Philosophical Magazine, 1st Series*: 4 (1834), ?? . • Poggendorff: 1, cols. 894-5. • Sarjeant, *Geologists*, 1980: 2, 1091 & Suppl. 2 (1996), 1, 650. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 172. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

1883. — English, 1832.

A | Descriptive Catalogue | Of | A New Collection Of Minerals | In The | Museum | Of The | Royal Dublin Society. | To Which Is Added | An Irish Mineralogy. | [rule] | By | Sir Charles Lewis Giesecke, | [...8 lines of titles and memberships...] | [rule] | Dublin: | R. Graisberry, | Printer To The Royal Dublin Society. | [short rule] | 1832.

8° in 4s: π^4 B-Z⁴ 2A-2K⁴ 2L²; 134ℓ.; [i]-iv, [5]-268 p.

CONTENTS: [i]-ii, Title page, verso blank.; [iii]-iv, Dedication to The Royal Dublin Society, signed Charles



DESCRIPTIVE CATALOGUE, 1832.

Lewis Giesecke, 1 March 1832.; [5]-199, "Systematic Collection | Of | Minerals."; [200], Blank.; [201], Sectional title page, "An | Irish | Mineralogy; | or, | A List | Of | Simple Mineral Substances | Hitherto Discovered In Ireland. | [rule] | Dublin: | R. Graisberry, | Printer To The Royal Dublin Society. | [rule] | 1832."; [202], Blank.; [203]-253, "An | Irish Mineralogy, | &c.&c."; [254], Blank.; [255]-268, "Tabular View | Of | The System."

VERY SCARCE. The dedication praises the Royal Dublin Society for allowing Giesecke the opportunity to prepare this catalog of the society's mineral collection. The system chosen for arranging the species is based upon external characters. With the addition of a separate tract on Irish mineralogy that lists those minerals that had so far been discovered in Ireland, it is clear that this *Catalogue* was also intended to help promote the study of mineralogy in the country. The collection was merged with the museums of natural history and industry in 1877 to form the present day National Museum of Ireland.

REFERENCES: BL: [no copy listed]. • Burchard, *Mineral Museums*, 1986: 137.

1884. — Danish, 1878 [First edition].

Gieseckes mineralogiske Rejse i Grønland ved F. Johnstrup. Med et Tillæg om de grønlandske Stednavnes Retskrivning og Etymologi af H. Rink. Hermed 3 Kaart. København 1878.

8°: xxvii, 20 p. VERY SCARCE.

1885. 2nd edition, 1910: Mineralogische Reisejournal fiber Grönland 1806-13. 2te.vollst.Ausg. Koph., 1910.

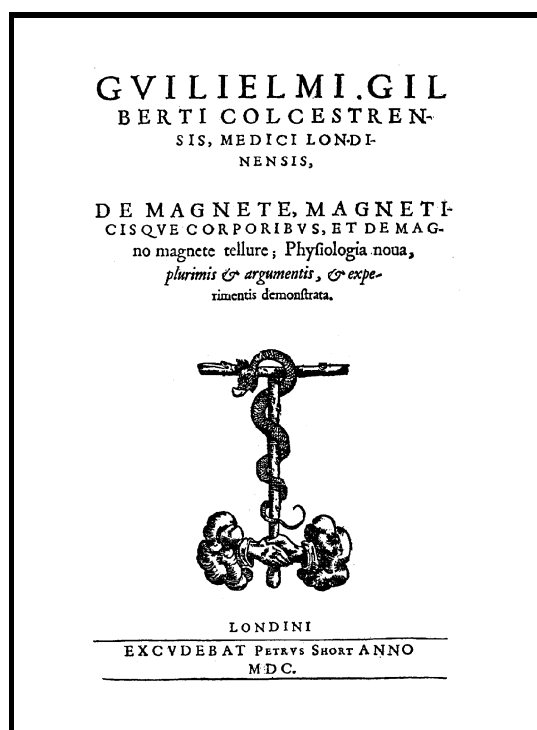
8°: xxxvii, 532 p., 4 plates. [Published as: Medd. 0

Gr^onl. Bd.35.] VERY SCARCE.

GILBERT (Gilbert), William. (BORN: Colchester, England, 1544 not 1540; DIED: London, England?, 30 November 1603) *English physicist & natural philosopher.*

Gilbert was born the son of a well-to-do town official. He attended St. John College, Cambridge, from 1558 to 1570 (B.A., 1561, M.A., 1564, M.D., 1569). While attending Cambridge he became a Junior Fellow of St. Johns in 1561. He was the mathematics examiner in the college, 1565-6 and bursar, 1569-70. He became a Senior Fellow in 1569. Although no one knows, it seems likely that Gilbert devoted the decade after his graduation to the study of magnetism. During this period he was supported through inheritances. In late 1507 he established a successful medical practice, becoming one of London's most prominent physicians. From 1600 to 1603, he was one of the personal physicians to Elizabeth I, for which he received a stipend of \$100 from the Royal Treasury. Before Gilbert's death he was also physician to James I.

REFERENCES: Dibner, Bern., *Doctor William Gilbert*, New York, 1947. • DNB: 7, 1217. • *Encyclopaedia Britannica*, 11th edition. • Kelly, S., *The De mundo of William Gilbert*, Amsterdam, 1965. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 895 & 1569. • Roller, *The De Magnete of William Gilbert*, 1959. • Singer, C., "Dr. William Gilbert," *Journal of the Royal Naval Medical Service*, Oct., 1916. • Suter, R., "A Biographical Sketch of Dr. William Gilbert of Colchester," *Osiris*, 10 (1952), 368-84. • Thompson, S.P., *Gilbert of Colchester; an Elizabethan Magnetizer*, London, 1891.



DE MAGNETE, 1600

1886. — Latin, 1600 [First edition].

Gvilielmi Gil | Berti Colcestren- | Sis, Medici
Londi- | Nensis, | De Magnete, Magneti- | cisque
Corporibvs, Et De Mag- | no magnetē tellure;
Physiologia noua, | plurimis & argumentis, & expe-
rimentis demonstrata. | [ornament] | Londini |
[rule] | Excudebat Petrvs Short Anno | MDC. |
[rule].

2^o: [16], 240 p. Woodcut printer's device on title, Gilbert's woodcut coat of arms on verso, numerous woodcut diagrams & illus. in the text, & one folding woodcut plate.

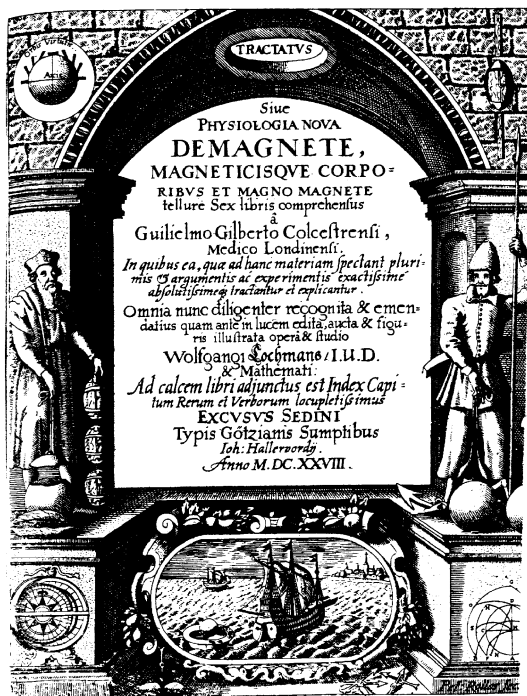
RARE. The first major English scientific treatise based on experimental methods of research and the foundation work of magnetism and electrical science. Gilbert uses here for the first time the terms "electricity," "electric force," and "electric attraction."

Book I "deals with the history of magnetism from the earliest legends about the lodestone to the facts and theories known to Gilbert's contemporaries...In the last chapter of book I, Gilbert introduced his new basic idea which was to explain all terrestrial magnetic phenomena: his postulate that the earth is a giant lodestone and thus had magnetic properties...The remaining five books of the *De magnete* are concerned with the five magnetic movements: coition, direction, variation, declination, and revolution. Before he began his discussion of coition, however, Gilbert carefully distinguished the attraction due to the amber effect from that caused by the lodestone. This section, chapter 2 of book II, established the study of the amber effect as a discipline separate from that of magnetic phenomena, introduced the vocabulary of electrics, and is the basis for Gilbert's place in the history of electricity."—D.S.B.

REFERENCES: Dibner, *Heralds of Science*, 1955: no. 54. • DSB: 5, 397. • *Freilich Sale Catalog*: no. 210. • Honeyman Sale: 4, no. 1498. • Hoover Collection: no. 352. • Horblit: no. 41 [title page reproduced]. • Norman Catalog: 1, 905. • PPM: *Printing and the Mind of Man*: no. 107. • Roller & Goodman, *Catalogue*, 1976: 1, 460. • STC: 11883. • Wellcome Catalog (Books): 1, no. 2830. • Wheeler Catalogue: 72.

1887. — Latin, 1628 [2nd edition].

[Engraved title page, with the text contained within an elaborate border:] Tractatvs | Siue | Physiologia
Nova | De Magnete, | Magneticisque Corpo=
| Ribvs Et Magno Magnete | tellure Sex
libris comprehensus | â | Guilielmo Gilberto
Colcestrensi, | Medico Londinensi. | In quibus
ea, quæ ad hanc materiam spectant pluri=
| mis & argumentis ac experimentis exactissimè |
absolutissimeq, tractantur et explicantur. | Omni
nunc diligenter recognita & emen= | datius quam
ante in lucem edita, aucta & figu= | ris illustrata
operâ & studio | Wolfgangi Lochmans / I.U.D. | &
Mathemat: | Ad calcem libri adjunctus est Index



PHYSIOLOGIA NOVA DE MAGNETE, 1628

Capi= | tum Rerum et Verborum locupeletissimus
| Excvsvs Sedini | Typis Götzians Sumptibus |
| Ioh: Hallervordij. | Anno M. DC. XXVIII.

8°: [19], 232, [33] p., engraved title page, 12 plates, illus.

VERY RARE. Second edition, considerably rarer than the first, and containing a number of plates entirely different to the London edition.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, 460. • Roller, *The De Magnete of William Gilbert*, 1959: p. 174-5.

1888. 3rd edition, 1633: Tractatus, sive Physiologia Nova De Magnete, Magneticisq; corporibus & magno Magnete tellure, sex libris comprehensus, a Guilielmo Gilberto Colcestrensi, Medico Londinensi. In quibus ea, que ad hanc materiam spectant, plurimis & Argumentis & experimentis exactibussime absolutissimeque tractantur & explicantur. Omnia nunc diligenter recognita, & emendatius quam ante in lucem edita, aucta figuris illustrata, opera & studio D. Wolfgangi Lochmans, I. U. D. Ad calcem libri adiunctus est Index capitum, Rerum & Verborum locupeletissimus, qui in priore editione desiderabatur. Sedini, Typis Gotzianis, 1633.

4°: ...4, A-Z4 (illustrations inserted between T3 & T4, X4 & Y1, Z2 & Z3, Z3 & Z4, Z4 & Aa1), Aa-Mm4 (illustrations inserted between Aa4 & Bb1, Bb1 & Bb2, Bb3 & Bb4, Cc2 & Cc3, Cc3 & Cc4, Cc4 & Dd1, Dd1 & Dd2). [20], 232, [36] p. 2 folding plates, 12 text woodcuts. There are over 90 engravings illustrating this text. PAGE SIZE: 7 x 9 in. RARE.

REFERENCES: Honeyman Sale: 4, 1498. • Roller & Goodman, *Catalogue*, 1976: 1, 460. • Wellcome Catalog (Books): 1, no. 2831. • Wheeler Catalogue: no. 72a.

GILMAN, Daniel Coit. (BORN: 1831; DIED: 1908) *American educator.*

REFERENCES: ABA: I 615, 444-454; 616, 1-11. • Adams, *Dictionary of American Authors*, 1904. • Appleton *Cyclopedia of American Biography*. • National *Cyclopedia of American Biography*. • WBL. • Who Was Who in America: 1, ??.

1889. — English, 1899.

The Life Of | James Dwight Dana | Scientific Explorer | Mineralogist, Geologist, Zoologist | Professor in Yale University | By | Daniel C. Gilman | President Of The Johns Hopkins University | With Illustrations | [ornament] | New York and London | Harper & Brothers Publishers | 1899.

8°: π^6 1-24⁸ 25¹³; 211^l.; [i]-xii, 1-409, [1] p., 6 plates, bibliography of Dana's writings, index. PAGE SIZE: 205 x 130 mm.

CONTENTS: [Facing i], Frontispiece plate, "Professor James D. Dana (From a painting by David Huntington)," with tissue guard.; [i-ii], Title page, verso copyright notice.; [iii-iv], Dedication to Henrietta Francis Silliman, verso quote from Psalm CXI.; v-viii, "Contents."; ix, List of illustrations.; [x], Blank.; xi-xii, "Preface."; 1, "Life of James Dwight Dana. Part I."; [2], Blank.; 3-290, Text.; 291, "Part II. Scientific Correspondence."; 292, Blank.; 293-376, Text.; 377-384, "Appendix I." Poem by J.C. Palmer.; 385-394, Appendix II. Bibliography of James D. Dana.; 395-402, Appendix III. "The New Haven University: What it is, and what it requires by Prof. James D. Dana, LL.D., 1871."; 403, Appendix IV. "Miss Elisabeth E. Dana to Prof. E.S. Dana. A Note on the Dana Pedigree."; [404], Blank.; 405-409, "Index."; [1 pg], Blank.

SCARCE. A standard and somewhat boring biographical treatment of the great American mineralogist and geologist JAMES DWIGHT DANA including photographic reproductions and never before published letters.

REFERENCES: *Independent*: 52, 439-41. • *Nation*: 69, 455. • NUC. • *Outlook*: 64, 461-42.

GILPIN, Edwin.

1890. — English, 1901.

The | Minerals | Of | Nova Scotia, | By | Edwin Gilpin, Jr., Am., LL.D., Fellow Royal Society of Canada, | [...3 lines of titles and memberships...] | [ornament] | Halifax, N.S., | Commissioner of Public Works and Mines, | King's Printer, | 1901. | [rule] | Wm. Magnab, Printer, 3 Prince St., Halifax, N.S.

8°: [1]-78 p., one folding map.

CONTENTS: [Frontispiece, folding map.]; [1-2], Title page, verso blank.; [3], "Index."; [4], Blank.; [5], "Preface."—signed Edwin Gilpin, 1 May 1901.; [6], Blank.; [7], "Introduction."; [8], Blank.; [9]-78, Text.

VERY SCARCE. Gives an account of the geology of Nova Scotia, followed by accounts of the economic minerals found there. Included are descriptions of coal, graphite, gold, lead, iron, copper, and building stones.

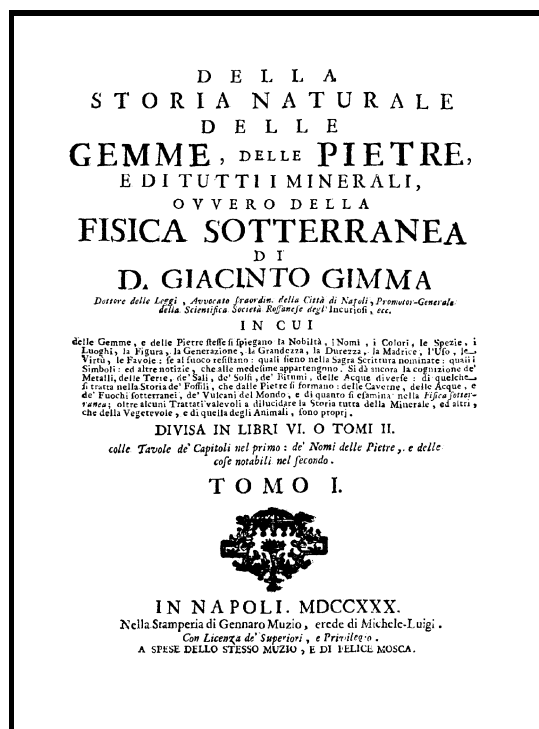
REFERENCES: NUC.

GIMMA, Giacinto, Abate. (BORN: Bari, Italy, 1668; DIED: Bari, Italy, 1735) *Italian lawyer, cleric & geologist.*

Gimma studied jurisprudence at the University of Naples. He published a large number of works that he authored or edited on a wide selection of learned subjects.

Canonical Abbot and, great sacred history student and literature, to single vent' years had already completed the course of philosophy and jurisprudence to the university of Naples. The Academy of the Spensierati (Incuriosi) of Rossano founded then in the 1695, but it refused the academic career offertagli near the university of Padova and Torino in order to dedicate itself to erudite and eclectic studies. A its great completed enciclopedico job between 1690 and 1693 is remained unknown. In 1700 taken the orders sacred and was name canonical of the Barium cathedral.

REFERENCES: ABI: I 481, 38-60. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Dizionario Biografico Italiani*: 54, 768-74 [by C. Preti]. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Giusti, D., *Vita ed opere dell'abate Gimma*. Bari, Italy, 1923. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Sarjeant, *Geologists*, 1980: 2, 1098 & Suppl. 1 (1986), 1, 445. • WBI.



DELLA STORIA NATURALE DELLE GEMME, 1730

1891. — Italian, 1730.

Della | Storia Naturale | Delle | Gemme, delle Pietre, | E Di Tutti I Minerali, | Ovvero Della | Fisica Sotterranea | Di D. Giacinto Gimma | [...2 lines of titles and memberships...] | In Cui | dell Gemme, e delle Pietre stesse si spiegano la Nobiltà, i Nomi, i Colori, le Spezie, i | Luoghi, la Figura, la Generazione, la Grandezza, la Durezza, la Madrice, l'Uso, le | Virtù, le Favole: se al suoco resistano: quali sieno nella Sagra-Scrittura

nominate: quali: | Simboli: ed altre notizie, che alle medesime appartengono. Si dà ancora la cognizione de' | Metalli, delle Terre, de' Sali, de' Solfi, de' Bitumi, delle Acque diverse: di qualche | si tratta nella Storia de' Fossili, che dalle Pietre si formano: delle Caverne, delle Acque, e | de' Fuochi sotterranei, de' Vulcani del Mondo, e di quanto si esamina nella Fisica sotter- | ranea; oltre alcuni Trattati valevoli a dilucidare la Storia tutta della Minerale, ed altri, | che della Vegetevole, e di quella degli Animali, sono proprj. | Divisa In Libri VI. O Tomi II. | colle Tavole de' Capitoli nel primo: de' Nomi delle Pietre, e delle | cose notabili nel secondo. | Tomo I. | [ornament] | In Napoli. MDCCXXX. | Nella Stamperia di Gennaro Muzio, erede di Michele-Luigi. | Con Licenza de' Superiori, e Privilegio. | A Spese Dello Stesso Muzio, E Di Felice Mosca.

2 vols. [VOL 1] 4°: π^4 b-f⁴ A-3Z⁴; 102 ℓ .; [48], 1-155, [1] p., frontispiece. [VOL 2] 4°: π^2 A-4F⁴ 4G²; 304 ℓ .; [4], 1-603, [1] p. PAGE SIZE: 222 x 174 mm.

CONTENTS: [Vol 1] Pp. [2 pgs], Half title page, "Della | Fisica Sotterranea | Di | D. Giacinto Gimma, | Tomo I," verso blank.; [Frontispiece]; [2 pgs], Title page, verso "Terra nulla sui ..."; [12 pgs], Dedication, dated 12 August 1729.; [17 pgs], "Fulgenzio Pascali."; [11 pgs], "... Tavola..." [=contents]; [2 pgs], "Eminentiss. E Reverendiss. Signore'."; [1 pg], "Si fa ordine, ..."; [1 pg], Errata.; 1-551, Text.; [1 pg], Blank.

[Vol 2] [2 pgs], Half title page, "Della | Fisica Sotterranea | Di | D. Giacinto Gimma, | Tomo II," verso blank.; [Frontispiece]; [2 pgs], Title page, verso 11Sunt & sub terra minis.; 1-4, "... Introduzione ..."; 5-544, Text.; 545-558, "Tavola I."; 559-603, "Tavola II."; [1 pg], Blank.

VERY SCARCE. First and only edition of this magnificent work, which is a summation of all that was worth knowing at the time of minerals and gemstones. Adams considered it a guide book to the maze of ancient literature of the geological sciences. It is divided into six books. The first describes gemstones and their precious nature together with extensive references. Other discussions include color, phosphorescence, luminescence, virtues, pricing and fake gemstones. The second book considers the precious stones like diamond, emerald, sapphire, ruby and others. The third describes stones of lesser value and the fourth discusses stones derived from organic sources such as calculi, boazoar and other like stones. The fifth book describes marbles, mosaics, pietre dure inlays and many other similar examples. The sixth book is largely on earths of various kinds.

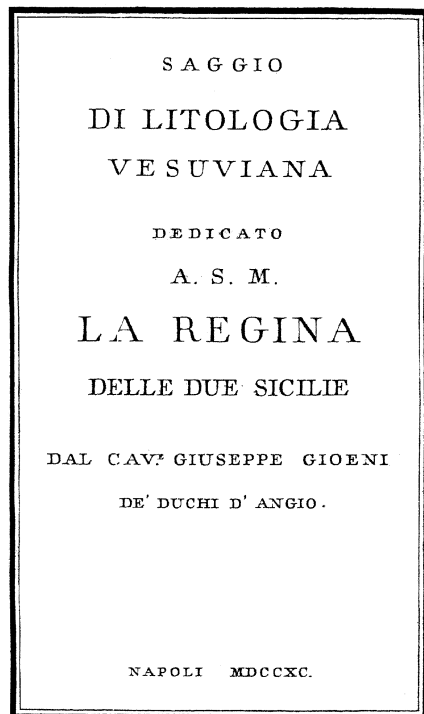
REFERENCES: BL: [457.b.5-6.]. • Dana's 7th (Bibliography): 71. • Hoover Collection: no. 353. • LKG: XIII 53. • Roller & Goodman, *Catalogue*, 1976: 1, 462. • Sinkankas, *Gemology Bibliography*, 1993: no. 2396. • Ward & Carozzi, *Geology Emerging*, 1984: no. 914.

GIOENI, Giuseppe. (BORN: 12 May 1747; DIED: 6 December 1822) *Italian naturalist.*

Gioeni was professor of natural history at the University of Catania in Sicily, and his publications center on the geology, botany and fauna of the island.

GIRALDINI

REFERENCES: ABI: I 482, 213; II 282, 133-219. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • Parenti, *Aggiunte al Dizionario*, 1952-60. • Poggendorff: 1, col. 901. • WBI.



SAGGIO DI LITOLOGIA VESUVIANA, 1790

1892. — Italian, 1790 [First edition].
[Contained within a double rule box:] Saggio | Di Litologia | Vesuviana | Dedicato | A.S.M. | La Regina | Delle Due Sicilie | Dal Cav.^e Giuseppe Gioeni | De' Duchi D' Angiò. | Napoli MDCCXC.
8°: [12], xcii, [2], 208, [2] p.

VERY SCARCE. This treatise concerning the lithology and mineralogy of Vesuvius brought fame to the author from all parts of Europe. The first portion of the work is a scientific discussion centering on the mineralogy of Mount Vesuvius, while the second part is a systematic catalog of volcanic substances the author had found in the vulcanoe's vicinity. Included in the descriptions are shells, amber, salts, grounds, metals, sulphurs, marbles, marbles, and crystals.

REFERENCES: BL: [725.c.20.]. • LKG: XIV 619a. • NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 462. • Ward & Carozzi, *Geology Emerging*, 1984: no. 916.

1893. 2nd edition, 1791: [Contained within a double rule box:] Saggio | Di Litologia | Vesuviana | Dedicato | A.S.M. | La Regina | Delle due Sicilie | Dal Cav.^e Giuseppe Gioeni | De' Duchi D'Anglo | Napoli 1791 | [rule] | Vendibili in Pavia presso Baldassare Comini. | Con premissione.

8°: A-Q⁸ R⁴ S⁴ (A1 blank); 136l.; [1]-272 p. PAGE SIZE: 175 x 115 mm. VERY SCARCE.

CONTENTS: [1-2], Blanks.; [3-4], Half title page, "Saggio Di Litologia Vesuviana," verso blank.; [5-6], Title

page, verso blank.; [7-8], Dedication signed Giuseppe Gioeni.; 9-264, Text.; 265-272, "Sinopsi del Catalogo Vesuviano."

REFERENCES: BL: [990.h.5.]. • LKG: XIV 619a. • NUC: [no copy listed].

1894. German transl., 1793: Versuch einer Lithologie des Vesuvs, von Ritter Joseph Gioeni. Aus dem Italienischen übersetzt, und mit einigen Anmerkungen begleitet, von Leopold von Fichtel. Wein, Bey Joseph Stahel, 1793.

8°: 392 p.

SCARCE. Translation by LEOPOLD VON FICHEL from *Saggio di Litologia Vesuviana* (2nd ed., Naples, 1791).

REFERENCES: BL: [no copy listed]. • Hoover Collection: no. 354. • LKG: XIV 620b. • NUC. • Ward & Carozzi, *Geology Emerging*, 1984: no. 917.

1895. — Italian, 1787.

Relazione della Eruzione dell'Etna nel Mese di Luglio MDCCLXXXVII Scritta d. c. G. G. ... Catania, Stamperia dell'Accademia degli Enei, 1787.

8°: 40 p.

VERY SCARCE. Describes an eruption of Mt. Etna in 1787.

REFERENCES: LKG: XIV 618. • NUC. • Ward & Carozzi, *Geology Emerging*, 1984: no. 915.



DISCORSO, 1626

GIRALDINI, Pier Francesco.

1896. — Italian, 1626.

[Contained within an elaborate engraved frame:]
 Discorso | Sopra La Pietra Belzvar | Minerale | Di
 Pier Francesco Girardini | Bolognese | All' Ill.^{mo}
 Sig.^{re} Cauasiere | Ferdinando Saracinelli | Bali Di
 Volterra. | in firenze appresso Zanobi Pignoni |
 Con licenza de Superiori.

4°: ✱⁴ A-M⁴ N⁵; 58ℓ.; [1]-106, [10] p., engraved
 title page. COLOPHON: Stampisi adi 4. Nouembre 1626.
 Niccolò dell'Antella. Ornamental initials and head- and
 tailpieces. VERY SCARCE.

REFERENCES: BL: [444.c.8.]. • Hoover Collection: no.
 355. • LKG: XVI 302. • Wellcome Catalog (Books): 1, no.
 2848.

GIRARDIN, Jean Pierre Louis. (BORN: 1803; DIED:
 1884) *French chemist.*

Professor in the agricultural school at Rouen.
 Authored a popular textbook of chemistry (Paris, 1836–
 37) that went through several editions.

REFERENCES: Poggenorff: 1, col. 905.

1897. — French, 1826 [First edition].

Éléments | De Minéralogie | Appliquée |
 Aux Sciences Chimiques; | Ouvrage Basé
 Sur | La Méthode De M. Berzélius, |
 Contenant | L'Histoire naturelle et métallurgique
 des Substances minérales, leurs | applications
 à la Pharmacie, à la Médecine et à l'Économie
 domestique; | suivi d'un | Précis Élémentaire
 De Géognosie. | Par J. Girardin et H. Lecoq,
 | Pharmaciens Internes Des Hôpitaux Civils De
 Paris. | Tome Premier. [-Second]. | [ornate rule]
 | Paris, | Thomine, Libraire, Rue De La Harpe, N°
 78. | [ornate rule] | 1826.

2 vols. [VOL 1] 8°: π^{10} b⁴ 1-32⁸ 33⁶; 276ℓ.; [i]-
 xxviii, [1]-522, [2] p., plates 1-3 (folding), folding table
 at p. 201. [VOL 2] 8°: π^8 1-30⁸ 31⁶; 254ℓ.; [i]-xvi, [1]-
 490, [2] p., plates 4-7 (folding; 3 hand-colored), folding
 table at p. 423. PAGE SIZE: 198 x 122 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, “Éléments | De
 Minéralogie | Appliquée | Aux Sciences Chimiques,” verso
 “Imprimerie De Huzard-Courcier.”; [iii-iv], Title page,
 verso blank.; [v], Dedication to N.-E. Henry, signed Lecoq.
 J. Girardin.; [vi], Blank.; [vii]-xx, “Introduction.”; [xxi]-
 xxviii, “Table Des Matières” (=table of contents of volume
 one).; [1]-522, Text.; [1 pg], “Errata du premier volume.”;
 [1 pg], Blank.; [At end], 3 folding plates.

[Vol 2] [i-ii], Half title page, “Éléments | De
 Minéralogie | Appliquée | Aux Sciences Chimiques,”
 verso “Imprimerie De Huzard-Courcier.”; [iii-iv], Title
 page, verso blank.; [v]-xvi, “Table Des Matières” (=table
 of contents of volume two).; [1]-460, Text.; [461]-
 464, “Tableau” (=crystalline forms of various artificial
 substances).; [465]-490, “Tableau Alfabétique | Des
 Matières.”; [1 pg], “Errata du second volume.”; [1 pg],
 Blank.; [At end], Folding plates 4-7.

SCARCE. Co-authored with HENRY LECOQ. The
 text of volume one begins with a description of
 the physical characters of minerals. Then chemical
 characters are considered followed by a discussion of the
 chemical composition of minerals. A review is given of

the previous mineral classifications of Hausmann, Haüy,
 Beudant, Bronigart, and Berzelius. The descriptive
 mineralogy then commences and this is carried through
 most of volume two. A section describing the metals
 in relation to mineralogy and a table of the crystalline
 forms of artificial chemicals close out the work.

REFERENCES: BMC: 2, 680.

1898. 2nd edition, 1837: Éléments | De Minéralogie |
 Appliquée | Aux Sciences Chimiques | Ouvrage Basé Sur
 | La Méthode De M. Berzélius | Contenant | L'Histoire
 naturelle et métallurgique des Substances minérales, leurs
 | applications à la Pharmacie, à la Médecine et à l'Économie
 domestique | suivi d'un | Précis Élémentaire De Géognosie
 | Par M.J. Girardin | [...2 lines of titles and memberships...]
 | Et | H. Lecoq | [...2 lines of titles and memberships...] |
 | Tome Premier [-Second] | Paris | Thomine, Libraire, Rue
 Saint-Jacques, 38 | [rule] | 1837.

2 vols. [VOL 1] π^{10} b⁴ 1-32⁸ 33⁶; 276ℓ.; [i]-xxviii,
 [1]-522, [2] p., 2 folding tables, 3 folding plates (pgs. 12 &
 202); [VOL 2] π^8 1-30⁸ 31⁶; 254ℓ.; [i]-xvi, [1]-490, [2] p., one
 folding table (pg. 422), 4 folding plates (3 hand-colored).
 PAGE SIZE: 196 x 125 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, “Éléments | De
 Minéralogie | Appliquée | Aux Sciences Chimiques | I.”
 verso “[rule] | Paris.—Imprimerie D'Amédée Saintin, | Rue
 Saint-Jacques, 38.”; [iii-iv], Title page, verso blank.; [v],
 Dedication to N.-E. Henry, signed H. Lecoq & J. Girardin.;
 [vi], Blank.; [vii]-xx, “Introduction.”; [xxi]-xxviii, Table of
 contents, volume 1.; [1]-522, Text.; [1 pg], Errata.; [1 pg],
 Blank.

[Vol 2] [i-ii], Half title page, “Éléments | De
 Minéralogie | Appliquée | Aux Sciences Chimiques | I.”
 verso “[rule] | Paris.—Imprimerie D'Amédée Saintin, | Rue
 Saint-Jacques, 38.”; [iii-iv], Title page, verso blank.; [v]-
 xvi, Table of contents, volume 2.; [1]-460, Text.; [461]-464,
 “Tableau | Des Formes Cristallines ...”; [465]-490, “Table
 Alphabétique | Des Matières.”; [1 pg], “Errata Du Second
 Volume.”; [1 pg], Blank.

SCARCE. Co-authored with HENRY LECOQ. After a
 long introduction, the text of volume one begins with
 a description of the physical characters of minerals.
 Then chemical characters are considered, with a detailed
 examination of how chemistry may be successfully applied
 to mineralogy. Based upon the theories of Berzelius
 [q.v.], a general scheme for classifying minerals with a
 discussion of its underlying principles is then presented.
 Included is an overview of mineralogical nomenclature. The
 descriptive mineralogy then commences and completes the
 first volume. Volume two continues and concludes the
 descriptive mineralogy. Two long sections about geognosie
 and metallurgy complete the text. A subject index to both
 volumes finishes the book.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1,
 463.

GISTEL (Gistl), Johannes Nepomuk Franz Xaver.
 (BORN: Munich, Germany?, 1803; DIED: Stuttgart,
 Germany?, c1873) *German naturalist and natural
 history dealer.***1899. — German, 1856** [First edition].

Die | Naturforscher | diess- und jenseits der
 Oceane. | [double rule] | Reise- und Correspondenz-
 Handbuch | für | Geologen, Geognosten
 und Mineralogen, Botaniker, Zoologen | ganz
 besonders, | Entomologen, Anataomen, rationelle
 Aerzte, Astronomen, | Physiker, Chemiker und
 Pharmazeuten. | [rule] | Unter Mitwirkung von
 dreiundsechzig Naturforschern | redigirt durch

| Johannes Gistel, | [...5 lines of titles and
memberships...]| [rule]| Straubing, 1856. [short rule]
| Verlag der J. Schorner'schen Buchhandlung. |
[short rule]| (Druck von J.F. Rietsch in Landshut.)

CONTENTS: [1-2], Title page, verso long quotation signed Jean Paul.; [3], "Den | gesammten Naturforschern | und Aerzten | als | Album | verehrungsvollst gewidmet."; [4], "Glück auf, Glück auf, Glück auf!"; [5]-10, "Zur Einleitung."—sigid J. Gistel, 1856.; [11]-122, Text.; [123], Sectional title page, "Die | Naturforscher | diess- und jenseits der Oeane."; [124], Blank.; [125]-332, Addresses.; [333]-336, "Zusätze und Berichtigungen."; [337]-366, "Register der Wohnorte."; [367]-372, "Das | Museum für Kunst und Natur | und sein | Filial-Institut des Naturprodukten-Verkehrs | in | Deutschland."

REFERENCES: BL: [no copy listed]. • BMC: [no copy listed]. • Bridson, *History of Natural History*, 1994: Ba104. • NUC. • Personal communication: [Leslie Overstreet,

A portrait of Johann Wolfgang von Goethe, facing slightly to the right. He has long, wavy hair and a full beard. He is wearing a dark coat with a high collar and a circular brooch at the waist. The portrait is enclosed in an oval frame. The Latin inscription around the frame reads: "Johann Wolfgang Goethe, Poeta, Historiographus, Philosophus, Jurisconsultus, Medicus, Architectus, Ingenieur, etc." The date "M. DC. LXXXV." is inscribed at the bottom left, and "A. S." is at the bottom right.

REFERENCES: *Great Chemists*: 115-134, portrait. • Gugel, K.F., *Johann Rudolf Glauber, 1604-1670. Leben und Werk*. Würzburg, 1955. • NDB: **6**, 437a-438a. • Schaedler,

Biographisch Handwörterbuch, 1891: 42. • Van Spronsen, J.W., "Glauber grondlegger van chemische industrie," *Nederlandse chemische industrie*, Nr. 5, 3 March 1970, p. 3-11. • *World Who's Who in Science*: p. 662.

1901. — Latin, 1658 [2nd Latin ed.].

Furni Novi Philosophici, sive Descriptio Destillatoriae Novae; Nec non Spirituum, Oleorum, Florum, aliorumque Medicamentorum ... Amsterdam, J. Janssonius 1658.

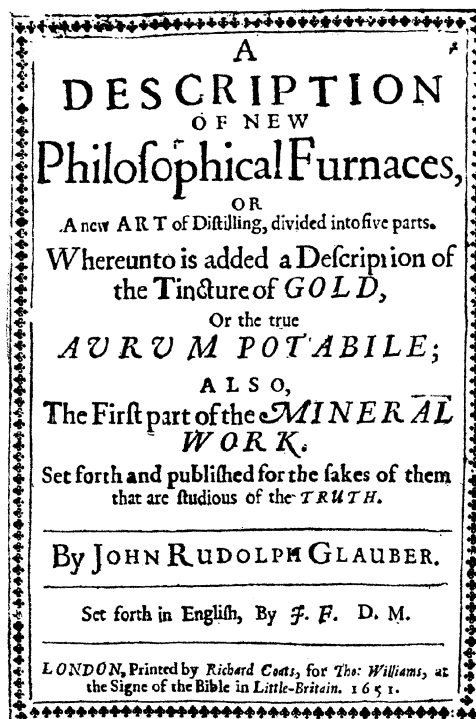
Sm.-8 . 67, (5) pp. (penultimate and last blank). With 1 engraved and folded plate.

VERY SCARCE. (WITH:) GLAUBER: Furnorum philosophicorum pars altera, In qua Describitur secundae fornacis proprietates; cuius beneficio destillari possunt omnia volatilia, subtilia & combustibilia; vegetabilia, animalia & mineralia; viâ quâdam incognitâ hactenus & compendiosâ; quâ nihil perditur omnino, sed spiritus etiam subtilissimi capiuntur, quod alias per retortas, aliaque vasa fieri nequit. Amsterdam, J. Janssonius 1658. Sm.-8 . 148, (4) pp. (WITH:) GLAUBER: Furnorum philosophicorum pars tertia in qua Describitur tertiae fornacis natura, cujus beneficio & quidem absque vesicis & ahenis; aliisque cupreis, ferreis, stanneis & plumbeis instrumentis, spiritus varii vegetabiles ardentis extracta, olea, salia. &c. Adminiculo autem exigui alicujus instrumenti cuprei, vasorumque ligneorum, ad usus tam chymicos quàm medicos praeparari possunt. Amsterdam, J. Janssonius 1658. Sm.-8 . 55 pp. With 2 engraved and folded plates. (WITH:) GLAUBER: Fornacum philosophicarum pars quarta, Continens Descriptionem Fornacis Quartae, cuius beneficio Mineralia & Metalla probantur & examinantur viâ quâdam compendiosiore, quàm hactenus modo illo vulgari; item Metallorum separationem vi fusionis; aliaque necessaria vi fusionis perpetranda. Utilissima Chymicis, Mineralium probatoribus & fossoribus. Amsterdam, J. Janssonius 1658. Sm.-8 . 83, (5) pp. (the last 3 blank). With a full-page woodcut. (WITH:) GLAUBER: Fornacum philosophicarum pars quinta. Ubi agitur de natura Quintae Fornacis mirabili; ut & de instrumentorum & materialium ad praedictos 4. Furnos pertinentium, praeparatione facili. Utilissima Medicinae Hermeticae sectatoribus (-appendix). Amsterdam, J. Janssonius 1651. Sm.-8 . 54 pp., (1) leaf (blank). With 7 - in part full-page - woodcuts. (WITH:) GLAUBER: Annotationes in appendicem quintae Partis Fornacum Philosophicarum, ubi de variis agitur Secretis utilissimis, optimis & incognitis, incredulorum & naturalium Secretorum ignororum gratiâ publicatae. Amsterdam, J. Janssonius 1658. Sm.-8 . 72 pp. Contemporary calf (rubbed, spine defective). 6 parts in 1 vol. Sothran I, 1560 (incompl.).

Second Latin edition, part 5 + appendix in the first one. Very rare to find it complete with all plates. Glauber's main work on chemistry, mineralogy etc. Browned throughout, slim upper margins (affecting in places the head-line). Some browning and damp-staining throughout.

Glauber (1603-1668) apparently self-taught, read books on alchemy, experimented, and conversed with others to educate himself. "After many years of travel, study, and experiment, during which he acquired an extensive knowledge of chemistry, pharmacy, geology, mineralogy, and technology, Glauber in 1646 went to Holland; he settled in 1648 in Amsterdam, where he had a large laboratory, called a 'Hermetic Institute'..." Partington, 341. The "Furni Novi" is Glauber's most famous work and his first, "This is certainly one of the most remarkable books on chemistry of the seventeenth century," Ferguson. It "...contains most of his important chemical discoveries," Partington. The work on potable gold was Glauber's first published treatise and in it he stated that it, "...is next to the philosopher's stone the most outstanding of all medicines, and that there is no difference between them." Thorndike VII, 201. Caillet 4573, 4566. Esoterica 1879. Duveen 258 (later ed.), 252. Ferguson I, 324. Partington II, 344. Hoover 362, 360. Krivatsy 4784, 4774. Wellcome 122, 125.

REFERENCES: Zeitlinger & Sothran, *Bibliotheca Chémica*, 1921-52: 1, no. 1560 [incomplete].



DESCRIPTION, 1651

1902. — English, 1651 [English transl.].

[Contained within an ornamental box:] A | Description | Of New | Philosophical Furnaces, | Or | A new Art of Distilling, divided into five parts. | Whereunto is added a Description of | the Tincture of Gold, | Or the true | Aurum Potable; | Also, | The First part of the Mineral | Work. | Set forth and published for the sakes of them | that are studious of the Truth. | [rule] | By John Rudolph Glauber. | [rule] | Set forth in English, By J.F. D.M. | [rule] | London, Printed by Richard

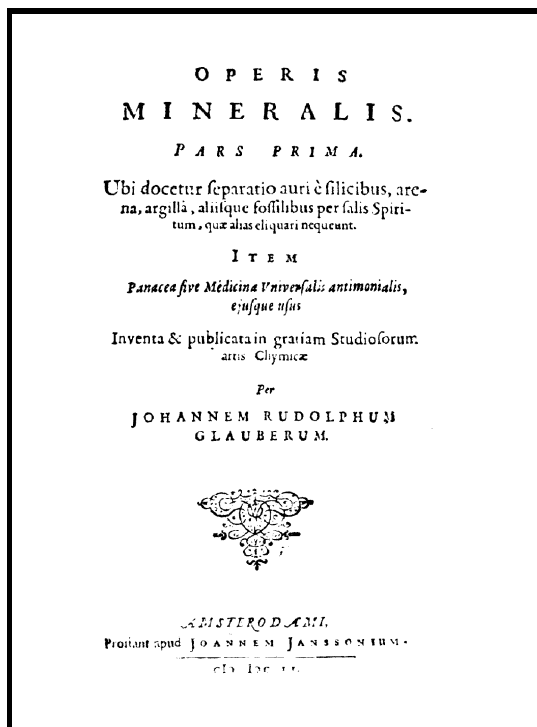
GLAUBER

Coats, for The: Williams, at | the Signe of the Bible in Little-Britain. 1651.

4°:

VERY RARE. First English edition of the *Furni Novi Philosophici*, translated by John French, M.D., [1616?-1657]. This work was one of the author's most important, describing a large number of new chemical processes with illustrations of the apparatus.

REFERENCES: Zeitlinger & Sotheran, *Bibliotheca Chemico*, 1921-52: no. 8469.



OPERIS MINERALIS, 1651

1903. — Latin, 1651 [First edition].

Operis | Mineralis. | Pars Prima. | Ubi docetur
separatio auri è silicibus, are- | na, argillâ,
aliisque fossilibus per salis Spiri- | tum, quæ
alias eliquati nequeunt. | Item | Panacea sive
Médicina Vniversalis antimonialis, | ejusque usus
| Inventa & publicata in gratiam Studiosorum |
zrtis Chymicæ | Per Johannem Rudolphum |
Glauberum. | [ornament] | Amsterodami. | Prostant
apud Joannem Janssonium. | [rule] | c1651.

3 parts bound in one volume. [Part 1] 8°: 67, [3] p. [Part 2] 8°: 47, [1] p. [Part 3] 8°: 110 p.

VERY SCARCE. Translation of original German work: *Operis mineralis*. One of Glauber's most important works, the *Operis Mineralis* discusses all manner of phenomena associated with minerals and the earth. On the origin of ore deposits, Glauber is of

the opinion that if this is not the actual lake of fire prepared for sinners the latter must at least be situated somewhere in the immediate vicinity. He also discusses of the arrangement of the metallic veins in the earth resembling a tree with its branches growing up from the center of the earth. He believed that base metals were continuously transforming to the nobler metals, going continuously forward in time, which in the course of time will result in the final passage to gold. Therefore, when miners found some other mineral substance other than gold, for example bismuth or tin, they have opened up an immature mineral vein. Glauber goes on to observe that if an ore body which has not been worked for some years is again opened that the exposure of the mineral veins to air causes one to frequently find an abundance of silver. It was the believe of the alchemists that the transformation from baser to nobler metals was indeed occurring in the earth's crust when the conditions were favorable. It was the alchemist's goal to recreate those conditions in the laboratory, but to cause the reaction to change more rapidly.

Pars 1. Ubi docetur separatio auri e silicibus, arena, argilla aliisque fossilibus per salis spiritum, quæ alias eliquari nequeunt : item panacea sive medicina universalis antimonialis, ejusque usus – pars 2. De ortu & origine omnium metallorum & mineralium, quo scilicet pacto illa per astra producantur ex aqua & terra corpus sibi suscipiant & multiplici forma formentur – pars 3. In qua titulo commentarii in libellum Paracelsi Coelum philosophorum, sive, Liber vexationum dictum, metallorum transmutationes in genere docentur, cum appendice specialem earum processum, ut & eorundem eliquationem, explorationem, separationem aliasque necessarias operationes demonstrante.

REFERENCES: Adams, *Birth and Development*, 1938: p. 288. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 326. • *Freilich Sale Catalog*: no. 211. • Hoover Collection: no. 364. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 1682. • Partington, *History of Chemistry*, 1961-70: 2, 341-61.

1904. 2nd edition, 1659: *Operis Mineralis* ... Amsterdam, Johann Jansson, 1659.

3 parts in one volume. 8°: 67, [2], 47, 110 p. Separate title pages for each part. One folding illustration, four full-page woodcuts, and four textual woodcut figures. Woodcut ornaments on title pages, tailpieces. Catchwords throughout. PAGE SIZE: 15.25 x 9.5 cm.

VERY SCARCE. Glauber was born at Karlstadt, Germany, and was largely self-educated, visiting laboratories in Paris, Basel, Salzburg, and Vienna where he studied chemistry and alchemy. He was, for a short time after 1635, court apothecary in Giessen. He then settled in Amsterdam where he remained for most of the rest of his life. There he invented furnaces for distilling, and established an elaborate laboratory containing many devices of his own creation. He called himself a chemical philosopher and was a prolific writer. In his later years he leaned more to the extreme edges of alchemy and left off much of his laboratory work. In his mineralogy Glauber was most expert with salts, believing that the sun's power was carried to the earth in an aerial salt. In *OPERIS MINERALIS* he theorized about the sun's rays being concentrated in the earth to produce metals. His *FURNI NOVI PHILOSOPHICI*, first published 1646-49, the second work included here, is among his most famous writings. It is a work on the design and use of furnaces for distilling, extending greatly the numbers and types of

materials that could be distilled. Ferguson calls it "one of the most remarkable books on chemistry of the seventeenth century." Glauber tended to bring more specific chemistry into alchemy than his predecessors had done, yet in much of his thinking he was still an alchemist of the traditional type. Foxed throughout, some pages browned, otherwise a very good copy of two important works in chemistry and alchemy. Thorndyke VII, 197-201. DSB V, 419-423. 1-1399

1905. German transl., 1658-9: Johannis Rudolphi | Glauberi | Philosophi & Medici Celeberrimi | Opera Chymica, | Bücher und Schrifften/ | so viel deren von ihm bißhero an | Tag gegeben worden. | Jetzo von neuem mit Fleiß übersehen/ auch mit | etlichen neuen Tractaten vermehret/ vnd vmb mehrer | Bequemlichkeit willen/ in diestFrom zusammen getragen/ sampt | ein darz gefertigten vollkommenen Register. | Mit Churf. Sächs. Als Vicarii, Reichs=Privilegio. | [vignette] | Franckfurt am Mäyn/ | In Verlegung Thomæ=Matthiæ Götzens. | [rule] | Im Jahr M DC LVIII.

2 vols. in one. [VOL 1] 4°: [24], 554 (i.e., 574) p. [VOL 2] 4°: 444, [30] p. Woodcut printer's mark on the title pages, 7 folding engraved plates. Also published separately. V.2 t.-p.: Johannis Rudolphi Glauberi Operum chymicorum. Errors in paging: v. 1, p. 285 numbered 287; v. 2, p. 451 numbered 45; 468-487 omitted in paging. Title vignettes; head and tail-pieces, initials. Errata: v. 2, p. 325. Includes indexes.

RARE. Last edition to appear during Glauber's lifetime, this work collects together several previously published works by the author. In volume one may be found *Pharmacopaeae [sic] spagyricae – Grundliche und warhafftige Beschreibung, wie man an dem Weinhefen einen guten Wein-stein in grosser Menge extrahiren soll – Miraculum mundi – Miraculi mundi continuatio – Operis mineralis – Tractatus de natura salium – Tractatus de signatura salium, metallorum et planetarum – Trost der Seefahrenden*. In volume two may be found *Furni novi philosophici – Apologetische Schrifften – De auri tinctura sive auro potabili vero – Des Deutschlands Wohlfahrt*.

REFERENCES: Ferchl: p. 187. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 322. • Sallander, *Bibliotheca Walleriana*, 1955: no. 11153.

1906. German transl., 1705: Operis mineralis oder vieler künstlicher und nützlichen metallischen Arbeiten Beschreibung erster (-dritter) Theil. Prag, Wussin, 1705.

8°: 324 (i.e., 320) p.

VERY SCARCE. "Das Buch ist in drei Teile eingeteilt. In ihm befaßt sich Glauber eingehend mit der Gewinnung und Trennung der Metalle; er beschreibt darin teils alte, teils neue Verfahren und zeigt sich in der Materie außerordentlich bewandert. Das Werk enthält alle bisher im Bergbau angewendeten Methoden, auch auch einige neue" (Gugel). Er beschreibt aber auch, wie aus dem Antimonio eine allgemeine Medizin werden soll. - Ohne Vorsätze. Stellenweise leicht wasserrandig. Einband etwas fleckig und bestoßen. Unteres Kapital leicht eingerissen, sonst ordentlich. - Neu 1681; vgl. Gugel 3.

1907. French transl., 1659: La Premiere[-troisiesme] Partie de l'Oeuure Minerale par Iean Rudolphe Glauber et mise en François par le sr. Du Teil. A Paris, Chez Thomas Iolly ..., 1659.

3 parts in one volume.

VERY SCARCE. v. 1. Ou est enseignee la separation de l'or des pierres a feu, sable, argile, & autres fossiles, par l'esprit de sel ... comme aussi vne panacee, ou medecine vniuerselle, antimoniale, & son vsage — v. 2. De la naissance & origine de tous les metaux & mineraux ... — v. 3. Commentaire sur le liure de Paracelse, appelle Le ciel des philosophes ...

NOTES Translation of: Operis mineralis.

INDEXES References: Kress Lib., 993.

REFERENCES: Caillet, *Manuel*, 1912: no. 4584. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 327 [parts ii-iii]. • Sudhoff, *Bibliographia Paracelsica*, 1894: 388.

GLEICHEN-RUSSWURM, Wilhelm Friedrich.

REFERENCES: *Catalogue of Portraits of Naturalists*: 844 [1 portrait listed]. • Poggendorff: 1, col. 911.

1908. — German, 1782.

Von Entstehung, Bildung, Umbildung und Bestimmung des Erdkörpers aus dem Archiv der Natur und Physik. Dessau, Gelehrte-Buchhandlung, 1782.

8°: 150 p., illus. A separate reprint from an article that appeared in the *Archiv der Natur und Physik* that deals with the emergence, composition, and determination of the bodies found with in the earth. RARE.

REFERENCES: BL. • Dryander, *Catalogus Banks*, 1796-1800: p. 277. • LKG: XIII 150.

GLINKA, Sergei Fedorov. (BORN: 1855; DIED: 2 November 1924) Russian mineralogist & crystallographer.

Glinka was a professor of mineralogy and crystallography at the University of St. Petersburg.

REFERENCES: RBA: Russian Biographical Archive: I 127, 103-105. • WBI. • Zvorykin, *Biograficheskii Slovar*, 1958: 1, 244-5.

1909. — Russian, 1895.

Общий Курсъ | Кристаллографии. | [rule] | Составиль | С.Ф. Глинка, | [...one line of titles and memberships...] | [ornate rule] | С.-Петербургъ. | Книжный Магазинъ А.Ф. Цинзерлинга. | (бывшій Мелье и Комп.) | Невскій просп., 20. | 1895.

[2], [I]-II, [2], [I]-II, [1]-228 p., 435 text illus. PAGE SIZE: 250 x 165 mm.

CONTENTS: [2 pgs], Title page, verso printer information.; [I]-II, "Содержание." [=table of contents]; [1 pg], "Предисловіе"—signed S. Glinka, 1895.; [1 pg], Blank.; [I]-II, "Опечатки."; [1]-228, Text.

RARE. This is the author's introductory course in crystallography. The basics are covered including crystal systems and classifications, notation, symmetry laws, etc. It describes physical crystallography and includes hundreds of excellent crystal drawings to illustrate the text. Also included are sections on the twinning of crystals and the description and use of goniometers.

REFERENCES: BL: [no copy listed].

GLOCKER, Ernst Friedrich. (BORN: Stuttgart, Germany, 1 May 1793; DIED: Stuttgart, Germany, 15 July 1858) German mineralogist.

Glocker was successively docent (1818), extraordinary (1824) and ordinary professor of mineralogy (1832) at the University of Breslau. In 1854 he retired and traveled extensively before settling in his birth town.

REFERENCES: ADB: 9, 238. • DBA: I 397, 149-150. • Lambrecht & Quenstedt, *Catalogus*, 1938: 165. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, cols. 912-3. • Sarjeant, *Geologists*, 1980: 2, 1102-3. • WBI.

1910. — Latin, 1824.

De Gemmis Plinii inprimis de Topazio. Oryctologiae Plinianae specimen primum scripsit Ernestus Fridericus Glocker, Philosophiae doctor Gymnasii

GLOCKER

magdal. Vratislav collega ... Vratislaviae, apud J. Max et soc., 1824.

8°: 74 p

RARE. Breslau, Breslau, Univ., Diss., 1824

Pliny, the Elder. *Naturalis historia*. Gems – Topaz.

REFERENCES: BL: [726.c.33.].

1911. — German, 1827 [Bibliography].

Versuch einer Charakteristik der schlesisch-mineralogischen Literatur bis zum Ende des achtzehnten Jahrhunderts. [Breslau, 1827].

Small 4°: [2], 44 p.

VERY RARE. This is a bibliography of the mineralogical literature of Schelisa in Germany to the year 1800. A second part covering the period 1800 to 1832 was published in Breslau, 1832. It is as the title:

Versuch | einer | Charakteristik | der | schlesisch-mineralogischen | Literatur | von 1800 bis 1832. | [rule] | Von | Dr. Ernst Friedrich Glocker. | [rule] | [tapered rule] | Breslau, | bey Jos. Max und Comp. | 1832. 8°: [2], 65 p.

REFERENCES: BL: [725.i.6.(3.)].

1912. — German, 1829.

Uebersicht | der | Crystallisationssysteme | in tabellarischer Form, | zum Gebrauche | bey ersten | Unterrichte in der Mineralogie. | [rule] | Ein Versuch | von Ernst Friedrich Glocker. | [rule] | Mit zwey Steindrucktafeln. | [tapered rule] | Breslau, | bey Jos. Max und Comp. | 1829.

8°: [1]-64; 24ℓ.; [i]-vi, [7]-48 p., 2 plates showing 44 crystal drawings. PAGE SIZE: 257 x 208 mm.

CONTENTS: [i-ii], Title page, verso blank; [iii]-vi, "Vorbemerkungen."; [7]-45, "Allgemeine Uebersicht."; 46, "Anmerkungen zum quadratischen und rhombischen Crystallisationssystem."; 47-48, "Erklärung der Figuren."; [At end], 2 plates.

VERY SCARCE. The author's views on the six crystallographic systems including the recently described quadratic and rhombic.

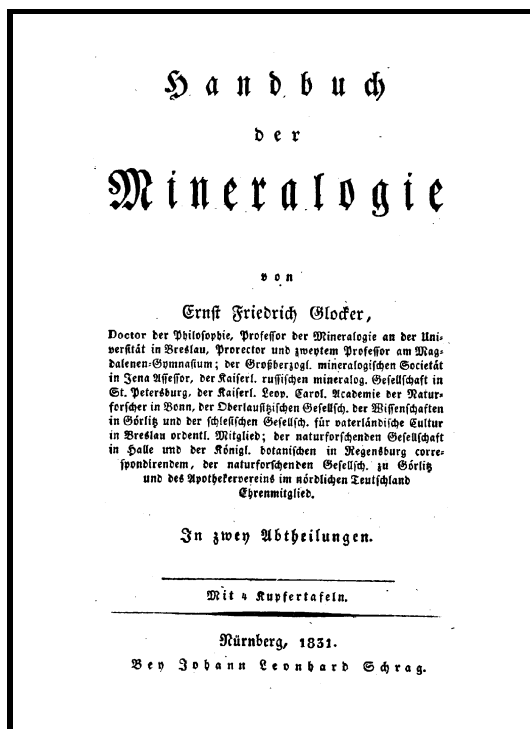
REFERENCES: NUC.

1913. — German, 1831.

Handbuch | der | Mineralogie | von | Ernst Friedrich Glocker, | [...12 lines of titles and memberships...] | In zwey Abtheilungen. | [rule] | Mit 4 Kupfertafeln. | [tapered rule] | Nürnberg, 1831. | Bey Johann Leonhard Schrag.

[EXTRA TITLE PAGE OF ABTHEILUNG 1:]

Handbuch | der | Mineralogie | von | Ernst Friedrich Glocker, | [...12 lines of titles and memberships...] | [tapered rule] | Erste Abtheilung, | Erste Abtheilung, | die Einleitung in die Mineralogie und die | allgemeine Oryktognosie enthaltend. | [rule] | Mit 4 Kupfertafeln. | [tapered rule] | Nürnberg, 1829. | Bey Johann Leonhard Schrag.



HANDBUCH DER MINERALOGIE, 1831

[TITLE PAGE OF ABTHEILUNG 2:]

Handbuch | der | Mineralogie | von | Ernst Friedrich Glocker, | [...12 lines of titles and memberships...] | [tapered rule] | Zweyte Abtheilung, | die specielle Oryktognosie und die Geognosie enthaltend. | [tapered rule] | Nürnberg, 1831. | Bey Johann Leonhard Schrag.

[SERIES TITLE PAGE:]

Vollständiger | Inbegriff der Pharmacie | in ihren | Grundlehren und praktischen Theilen. | [tapered rule] | Ein Handbuch | für Aerzte und Apotheker, | von | J. Andreas Buchner, | [...14 lines of titles and memberships...] | Vierten Theils, | Erster Band. | [rule] | Mit 4 Kupfertafeln. | [tapered rule] | Nürnberg, 1831. | Bey Johann Leonhard Schrag.

2 parts. [Part 1] 8°: π^{14} A-U4; 170ℓ.; [6], [i]-viii, [iii]-xvi, [1]-312 p., 4 engraved plates (crystal drawings), 44 text figures. [Part 2] 8°: π^6 X-4A8; 856ℓ.; [i]-xii, [313]-2012 p. PAGE SIZE: 200 x 120 mm.

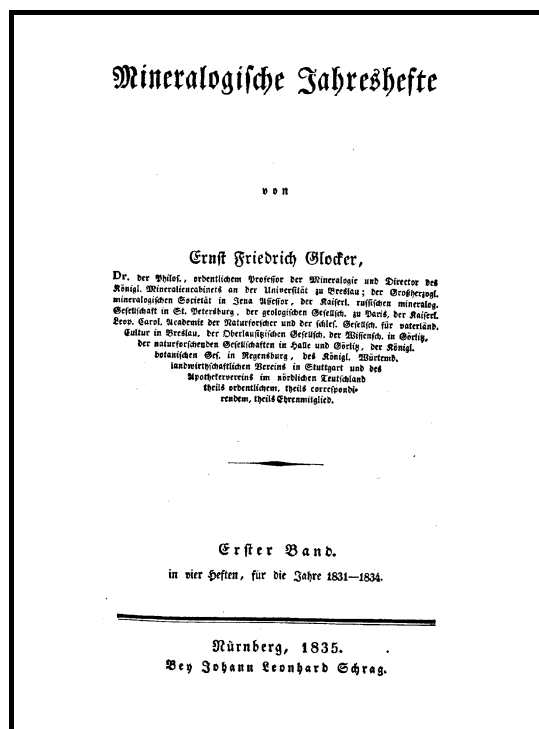
CONTENTS: [Part 1] [2 pgs], Half title page, "Handbuch für Aerzte und Apotheker, | von | Dr. Joh. Andr. Buchner. | Achte Lieferung. | [ornament]," verso blank; [2 pgs], Series title page, verso blank; [2 pgs], Title page, verso blank; [i]-ii, Additional title page (dated 1829), verso blank; [iii]-viii, "Vorrede"—dated August 1830; [iii]-xvi, "Uebersicht des Inhalts."; [1], Sectional title page, "Handbuch der Mineralogie. | [rule] | Erste Abtheilung, | die Einleitung in die Mineralogie und die allgemeine | Oryktognosie enthaltend."; [2], Blank; [3]-312, Text (one folding table, p. 101).

[Part 2] [i-ii], Title page, verso blank.; [iii]-xii, "Uebersicht des Inhalts."; [313], Sectional title page, "Handbuch der Mineralogie." | [rule] | Zweyte Abtheilung, | die specielle Orykognosie und die Geognosie | enthaltend."; [314], Blank.; [315]-1060, Text.; 1061-1098, "Register | zu beiden Abtheilungen."; 1099-2009, "Druckfehler und Verbesserungen."; 2009-2012, Publisher's list.

VERY SCARCE. Glocker's comprehensive treatment of mineralogy. In the first 54 pages of the first part is given a history of mineralogical science and literature review, particular with reference to oryctographical studies. This is followed by a description of crystal form, crystal systems, crystallography, physical characteristics, etc. In the second part, is provided an overview of classification schemes including artsy, chemical, and natural systems. A second section explains how to use the external characteristics to determine a the mineral in a hand specimen. This is followed by a lengthy descriptive mineralogy.

Published as Lieferung 8 of J. A. Buchner's *Vollständiger Inbegriff der Pharmacie in ihren Grundlehren und praktischen Theilen*.

REFERENCES: BL: [7510.a.13.]. • Dana's 7th (Bibliography): 72.



MINERALOGISCHE JAHRESHEFTE, 1835

1914. Supplements, 1835-41: Mineralogische Jahreshefte | von | Ernst Friedrich Glocker, | [...12 lines of titles and memberships...] | [tapered rule] | Erster Band. | in vier Heften, für die Jahre 1831-1834. | [double rule] | Nürnberg, 1835. | Bey Johann Leonhard Schrag.

[EXTRA TITLE PAGE OF HEFTS 1 & 2:] Mineralogische Jahreshefte | von | Dr. Ernst Friedrich

Glocker, | [...2 lines of titles...] | [rule] | Zugleich als fortlaufende Supplemente zu des Verfassers | Handbuch der Mineralogie vom J. 1831. | [tapered rule] | [rule] | Erstes und zweites Heft. | 1831 und 1832. | [double rule] | Nürnberg, | bei Johann Leonhard Schrag. | 1833.

[SERIES TITLE PAGE:] Supplemente | zu dem | im Jahr 1831 erschienenen | Handbuch der Mineralogie | von | Ernst Friedrich Glocker, | [...12 lines of titles and memberships...] | [tapered rule] | Erstes bis viertes Heft, | enthaltend die Entdeckungen und Vereicherungen der Wissenschaften aus | den Jahren 1831-1834. | [double rule] | Nürnberg, 1835. | Bey Johann Leonhard Schrag.

2 parts. [Part 1] 8°: π^7 1-18⁸ 19⁴ 20⁵; 155 ℓ .; [4], [i]-x, [1]-296 p. [Part 2] 8°: π 20⁶⁻⁸ 21-36* 37⁴; 135 ℓ .; [i]-vi, [297]-560 p. PAGE SIZE: 200 x 120 mm.

CONTENTS: [Part 1] [2 pgs], Blank, verso series title page (supplement).; [2 pgs], Title page, verso blank.; [i-ii], Extra title page, verso blank.; [iii]-vi, "Vorrede."—31 January 1833.; [vii]-x, "Inhalt."; [1]-293, Text.; 294, "Nachträge."; 295-296, "Druckfehler."

[Part 2] [i-ii], Title page, verso blank.; [iii]-vi, "Inhalt."; [297]-543, Text.; 544, "Nachträge zur speciellen Oryktognosie."; 545-558, "Register."; 559-560, "Druckfehler."

VERY SCARCE. In an effort to keep his comprehensive *Handbuch der Mineralogie* up-to-date, Glocker published a series of seven supplemental Heft from 1835 to 1841 containing notices of mineralogical discoveries for the previous few years. The title described above represents the first four such Heft. Within are descriptions of new techniques, equipment, theories, mineral descriptions, etc. Three others were published under the title *Systematischer Bericht* [which see note below].

Continuation, Heft 5, 1837: Systematischer Bericht | über die | Fortschritte der Mineralogie | im Jahr 1835. | Mit Berücksichtigung der Geologie und Petrefactenkunde. | [tapered rule] | Von | Ernst Friedrich Glocker. | [rule] | Mit Holzschnitten und 2 Tabellen. | [double rule] | Nürnberg, | bei Johann Leonhard Schrag. | 1837. 8°: xii, 410 p., 2 folding tables.

Continuation, Heft 6-7, 1841: Systematischer Bericht | über die | Fortschritte der Mineralogie, Geologie | und Petrefactenkunde | in den Jahren 1836 und 1837. | [tapered rule] | Von | Ernst Friedrich Glocker | [rule] | Mit einer Kupfertafel. | [double rule] | Nürnberg, | bei Johann Leonhard Schrag. | 1841. 8°: [2]. 411-608 p., one plate (crystal drawings).

REFERENCES: BL: [P.P.2115.]. • Personal communication: [Title pages for Heft 5-7 supplied by Ed Rogers, 2005].

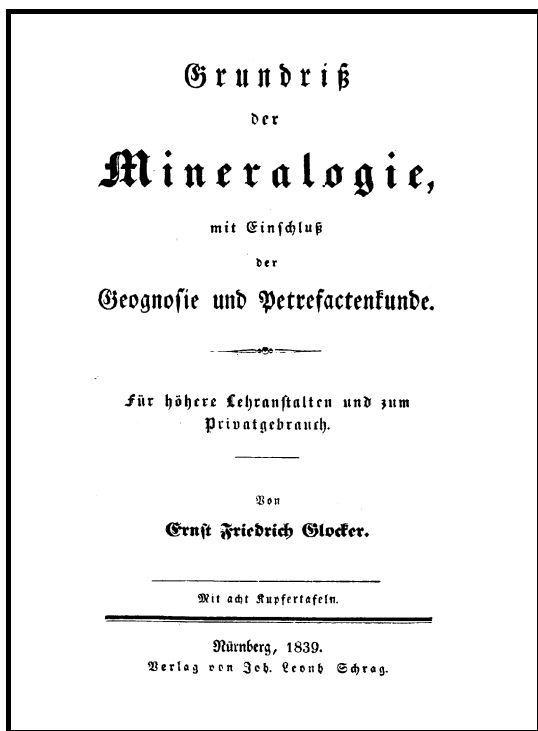
1915. — German, 1839.

Grundriß | der | Mineralogie, | mit Einschluß | der | Geognosie und Petrefactenkunde. | [ornate rule] | Für höhere Lehranstalten und zum | Privatgebrauch. | [rule] | Von | Ernst Friedrich Glocker. | [rule] | Mit acht Kupfertafeln. | [double rule] | Nürnberg, 1839. | Verlag von Joh. Leonh Schrag.

8°: [i]-xxxiv, [1]-988, [2] p., 8 folding plates (showing crystal drawings). PAGE SIZE: 192 x 120 mm.

CONTENTS: [i-ii], Title page, verso five lines of quotation signed Buckland.; [iii]-x, "Vorrede."—signed G.F. Glocker, January 1839.; [xi]-xxxiv, "Inhalt & Erklärung der Figuren."; [1]-899, Text.; 900-904, "Nachträge."; [905]-986, "Register."; 986-988, "Druckfehler und Berichtigungen."; [1 pg], "Noch ein Nachtrag zur speciellen Oryktognosie."; [1 pg], Blank.; [At end], 8 folding plates.

VERY SCARCE. The present work is Glocker's



GRUNDRIS DER MINERALOGIE, 1839

complete introduction to mineralogy, geology and paleontology. The introduction gives reasons for the study of mineralogy as well as a short, but valuable history of the subject. This is followed by a good bibliography of the best literature of mineralogy, crystallography, geology and palaeontology available at the time. Glocker then provides an interesting discussion of the value of mineralogy. General mineralogical topics are then covered, including crystallography, physical and chemical properties (pp. 34-233). A second part is a long, detailed descriptive mineralogy (pp. 235-698). General geological principles are discussed beginning at page 699, including a specific discussion of petrified remains.

REFERENCES: BL: [7104.b.22.]. • Dana's 7th (Bibliography): 72. • *Katalog Bergakademie Freiberg*, 1879: p. 239.

1916. — Latin, 1847.

Generum et Specierum Mineralium, | Secundum Ordines Naturales Digestorum | Synopsis, | Omnium Quotquot Adhuc Reperta Sunt, Mineralium | Nomina Complectens. | Adjectis Synonymis Et Veteribus Et Recentioribus Ac | Novissimarum Analysium Chemicarum Summis. | [ornate rule] | Systematis Mineralium Naturalis | Prodromus. | Scripsit | Ernestus Fridericus Glocker. | [rule] | Singula Quaeque Locum Teneant Sortita Decenter. | Horatius. | [rule] | Halae Saxonum | Apud Eduardum Anton. |

MDCCCXLVII.

8°: π^3 1-21⁸ 226; 178 ℓ .; [i]-v, [1], [1]-348, [2] p.

PAGE SIZE: 230 x 160 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-v, "Praefatio."—signed E.F. Glocker, September 1847.; [1 pg], "Sigla nominum."; [1]-306, Text.; 307-308, "Addenda."; [309]-348, Index.; [1 pg], "Corrigenda."; [1 pg], "Halis, Typis Ed. Heynemanni."

RARE. In his work entitled *Generum et Specierum Mineralium Synopsis* Glocker provides a synopsis of his systematic classification of minerals and gives many new chemical analysis of the species. The book is also one of the most extensive attempts at a systematic nomenclature that has been made in mineralogy. He uses in general a Latinized form of the common name for the name of each species, with some descriptive word added. For varieties he adds a third word, as is common in other branches of natural history. For instance, under *Granatus*, garnet, Glocker gives three species: 1st, *Granatus nobilis*, precious garnet; 2d, *Granatus hyacinthinus*, cinnamon garnet; and 3d, *Granatus vulgaris*, common garnet, and under the latter he uses for varieties the terminations *fuscus*, *niger*, *viridis*, *flavus*, and *albidus*. The work is in Latin, thus going back to the style of the scientific books of the previous centuries, which no doubt contributed to his contemporaries, for the most part, to ignore Glocker's ideas.

REFERENCES: BL: [7105.c.10.]. • Chester, *Dictionary of the Names of Minerals*, 1896: p. ??.

GMELIN, Johann Friedrich. (BORN: Tübingen, Germany, 8 August 1748; DIED: Göttingen, Germany, 1 November 1804) *German mineralogist & naturalist.*

Gmelin was father of the physician and chemist, Leopold Gmelin [1788-1853]. He was professor of medicine at Tübingen and professor of philosophy and medicine at Göttingen. In the spirit of his time, Gmelin worked in the fields of natural history, mineralogy, chemistry, entomology and botany.

REFERENCES: ADB: 9, 270. • *Catalogue of Portraits of Naturalists*: 485 [1 portrait listed]. • DBA: I 398, 336-366; II 455, 232-235. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1951-2. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 580. • Lambrecht & Quenstedt, *Catalogus*, 1938: 165. • Poggendorff: 1, cols. 914-5. • Schaedler, *Biographisch Handwörterbuch*, 1891: 42-3. • Wagenitz, *Göttinger Biologen*, 1988: 65. • WBI. • *World Who's Who in Science*: 665.

1917. — German, 1777-9.

Des | Ritters Carl von Linne' | Königlich Schwedischen Leibarztes &c. &c. | Vollständiges | Natursystem | des | Mineralreichs | nach | der zwölften lateinischen Ausgabe | in einer | freyen und vermehrten Uebersetzung | von | Johann Friederich Gmelin, | [...4 lines of titles and memberships...] | [rule] | Erster Theil. | Nebst fünf Kupfertafeln. | [rule] | Mit Churfürstl. Sächsischer Freyheit. | [ornate rule] | Nürnberg, | bey Gabriel Nicolaus Raspe, 1777.

4 vols. [VOL 1: 1777] 8°: π^2 A-R⁸ S⁶; 328 ℓ .; [4], [1]-652 p., 5 plates (folding, xl diagrams).; [VOL 2: 1778]



VOLLSTÄNDIGES NATURSYSTEM, 1777

8°:)(8 A-Hh⁸ Ii⁴; 260*l.*; [16], [1]-496, [8] p., 9 plates (xl diagrms, specimens); [VOL 3: 1778] 8°:)(8 A-Gg⁸ Hh³; 251*l.*; [16], [1]-486 p., 12 plates (specimens); [VOL 4: 1779] 8°: a-d⁸ A-L⁸ M⁷; 311*l.*; [i]-lxiv, [1]-548, [10] p., 30 plates (specimens). PAGE SIZE: 198 x 116 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Vorrede."—dated 1 September 1777.; [1]-652, Text.; [At end], Plates.

[Vol 2] [2 pgs], Title page, verso blank.; [12 pgs], "Vorrede."; [2 pgs], Publisher's list.; [1]-496, Text.; [8], Errata to first volume.; [At end], Plates.

[Vol 3] [2 pgs], Title page, verso blank.; [14 pgs], "Vorrede."; [1]-486, Text.; [At end], Plates.

[Vol 4] [i-ii], Title page, verso blank.; [iii]-lxiv, "Vorrede."; [1]-460, Text.; 461-528, "Allgemeines und Vollständiges | Namen Register | über alle vier Theile. | ..."; [10 pgs], "Verbesserungen."

SCARCE. A very much expanded "translation" by Johann Friedrich Gmelin from the mineralogical section of the 1766-8 Latin edition of Linné's *Systema Naturæ*. According to Soulsby, another edition of volume 4 was published in 1785. It has the pagination, 8°: lxiv, 521, [6] p., 30 plates.

Volume one contains introductory material including a general description of the science, an extensive and important bibliography of mineralogical science and the first portion of the descriptive mineralogy. The remaining volumes contain the bulk of the descriptive mineralogy. At the end of volume four is a comprehensive index.

REFERENCES: *Freilich Sale Catalog*: no. 360. • Hoover Collection: no. 542. • LKG: XII 75 & XVII 57. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 566. • Soulsby, *Catalogue*

of the Works of Linneaus, 1933-6: no. 100a. • Wallerius, *Brevis Introductio*, 1779: 72.



EINLEITUNG IN DIE MINERALOGIE, 1780

1918. — German, 1780.

Joh. Friedr. Gmelins | [...6 lines of titles and memberships...] | Einleitung | in die | Mineralogie | zum Gebrauch | akademischer Vorlesungen. | [ornament] | [ornate rule] | Nürnberg, | bey Gabriel Nikolaus Raspe, 1780.

12°: π² A-Aa⁶ Bb⁶ χ¹; 196*l.*; [4], [1]-380, [14] p. PAGE SIZE: 168 x 98 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Vorbericht."; [1]-380, Text.; [12 pgs], "Register."; [2 pgs], "Druckfehler."

SCARCE. In this introduction to the mineralogical science, Gmelin concentrates on the systematic component. The text begins with a brief review of definitions, and then proceeds to a systematic representation of the known minerals. This classification is based largely on external characteristics with some chemical information included.

REFERENCES: Dana's 7th (Bibliography): 72. • LKG: XII 81.

1919. — German, 1790.

Grundriss | der | Mineralogie, | entworfen | von | Joh. Friedr. Gmelin, | [...3 lines of titles and memberships...] | [tapered rule] | Mit Churfürstl. Sächs. gnädigster freyheit. | [ornate rule]

GMELIN

| Göttingen, | bey JohannChristian Dieterich | 1790.

8°:)(8 A-Z⁸ Aa-Pp⁸ Qq⁶; 318ℓ.; [i]-xvi, [1]-589, [31] p. PAGE SIZE: 168 x 95 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-x, Introductory remarks, signed J.Fr. Gmelin, 12 March 1790.; [xi]-xvi, "Inhalt.;" [1]-12, "I. Abschnitt. Allgemeine Grundsätze der Mineralogie.;" 13, "II. Abschnitt. Von dem Urstoff der Mineralogie.;" 14-19, "III. Abschnitt. Von den bildenden und zerstörenden Kräften im Mineralreiche.;" 19-589, "IV. Abschnitt. Allgemeine Eintheilung der Mineralien.;" [31 pgs], "Alphabetischer Register."

SCARCE. A systematic mineralogy that is divided into four sections. 1) Opening remarks with a bibliography of works on mineralogy [56 entries]. 2) Discussion of the elements which make up minerals. 3) Methods of breaking down minerals (i.e., fire, water, etc.). 4) The classification scheme (the bulk of the work). The systematic classification is divided into 4 classes. I. Erd- und Steinarten. II. Salts. III. Brennbare Mineralien. IV. Metallische Körper.

REFERENCES: Dana's 7th (Bibliography): 72. • LKG: XII 82a. • NUC: 202, 626-9.

1920. — German, 1783.

Beyträge | zur | Geschichte | des | teutschen Bergbaus, | vornehmlich | aus den mittlern und spätern Jahrhunderten | unserer Zeitrechnung | von | Johann Friedrich Gmelin. | [ornament] | [ornate rule] | Halle, | bey Johann Jacob Gebauer, 1783.

8°: [1]-452, [2] p.

VERY RARE. Early work on the history of mining in Germany from the earliest times.

REFERENCES: BL: [726.i.37.].

1921. — German, 1776-7 [First edition].

Allgemeine | Geschichte der Gifte | entworfen | von | Johann Friedrich Gmelin | [...2 lines of titles and memberships...] | [rule] | Erster Theil. | [ornament] | [rule] | Leipzig | in der Weysandschen Buchhandlung. | 1776.

[TITLE TO THEIL 3 READS:]

Allgemeine | Geschichte | der | mineralischen Gifte | entworfen | von | Joh. Friedr. Gmelin | [...3 lines of titles and memberships...] | [ornament] | [rule] | Nürnberg, | bey Gabriel Nicolaus Raspe, 1777.

3 vols. and atlas. [VOL 1: 1776] 8°: 350 (i.e., 348), [2] p. [VOL 2: 1777] 8°: [16], 525 (i.e., 523), [1] p. [VOL 3: 1777] 8°: [8], 316, [16] p. Engraved title vignettes and head pieces. [Atlas] 60 engraved hand-colored plates.

RARE, especially in three volumes. This is the author's *General History of Poisons* published in three parts. Within these volumes are described poisons from the animal, plant and mineral kingdoms. Gmelin provides information on the history of the use of these poisons, their sources, and preparation. There is also a large amount of information pertaining to the pharmaceutical use of the substances.

An extremely rare and widely unknown atlas of 60

hand-colored engraved plates is not mentioned in most bibliographies, but was in fact prepared to accompany this work. No copy of this atlas has been located.

Vol 1 provides a general introduction to the subject and treats poisons derived from animals.

Vol. 2 has title: Allgemeine Geschichte der Pflanzengifte ... Nürnberg, Bey Gabriel Nicolaus Raspe, 1777.

Vol. 3 has title: Allgemeine Geschichte der mineralischen Gifte ... Nürnberg, Bey Gabriel Nicolaus Raspe, 1777.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 35, 460 [review]. • *Berlinische Sammlungen*: 10, 304 [review]. • BL: [955.b.34.]. • Cobres, *Deliciae Cobresianae*, 1782: 2, 709. • Ferchl: p. 189. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 331. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 241. • Kopp, *Geschichte der Chemie*, 1843-7: 2, 100. • *L'Espirit des Journal*: October 1777, 385 & July 1778, 399 [review]. • *Leipziger allgemeines Verzeichniss*: 1777, 507 [review vol. 1]. • NLM 18th Century Books (Blake): p. 178. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 3701. • Wellcome Catalog (Books): 3, 127.

1922. 2nd ed, 1803-6: Allgemeine Geschichte der thierischen und mineralischen Gifte von Johann Friedrich Gmelin. Mit Vorrede von Johann Friedrich Blumenbach ... Erfurt, Knick, 1806.

2 vols. [VOL 1: 1803] 8°: xii, 852 p. (Erster Theil. Allgemeine Geschichte der Pflanzengifte.) [VOL 2: 1806] 8°: viii, 391 p. (Zweite Theil. Der thierischen und mineralischen Gifte.)

RARE. Gmelin, J. F. (1803). Allgemeine Geschichte der Pflanzengifte. Nürnberg,, In der Raspeschen Buchhandlung.

Gmelin, J. F. and J. F. Blumenbach (1806). Allgemeine Geschichte der thierischen und mineralischen Gifte. Erfurt, F.A. Knick.

Facsimile reprint, volume 1, 1973: *Allgemeine Geschichte der Pflanzengifte*. Walluf bei Wiesbaden, Sändig, 1973. xii, 852 p. [ISBN 3-500-26320-8].

1923. 2nd ed., 1811: Allgemeine Geschichte der thierischen und mineralischen Gifte. Zweite Auflage. Erfurt, Müller, 1811.

8°: viii, 391 p.

VERY SCARCE. Reissue of the 1806 edition.

1924. — German, 1786.

Chemische Grundsätze der Probir- und Schmelzkunst von J. Fr. Gmelin. Halle, Bei Johann Jacob Gebauer, 1786.

8°: viii, [1], 4-402 p. Includes index. Includes index. VERY SCARCE.

GMELIN, Johann Georg. (BORN: Tübingen, Germany, 12 June 1709; DIED: Tübingen, Germany, 20 May 1755) *German chemist & mineralogist*.

Gmelin was a member of a large scientifically inclined family. He accepted a lectureship at the Academy of Sciences in St. Petersburg in 1730 and in 1731 was promoted to professor of chemistry and natural sciences. In 1733 he was recruited as part of the scientific corps to accompany a trans-Siberian expedition. He proceeded as far as Yakutsk observing the natural history of Siberia. Several maps are included in his report including this description of the Arctic coast.

REFERENCES: ADB: 9, 269 & 22, 548. • Börner, *Vornehmsten Lebensumständen*, 1749-64. • *Catalogue of Portraits of Naturalists*: 485 [2 portraits listed]. • DBA: I 398, 368-424; II 455, 224, 236-239. • Drugulin, *Sechstausend Portraits*, 1863: nos. 1955-6. • DSB: 5, 427-9. • Gmelin,



JOHANN GEORG GMELIN

O., *Johann Georg Gmelin 1709-1755. Der Entforscher Sibiriens. Ein Gedenkbuch.* München, O. Gmelin, 1911. iii, 150 p., portrait. • Hirsch, *Biographisches Lexikon*, 1884-8. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • *ISIS*, 1913-65: 1, 493. • Jöcher, *Gelehrten-Lexikon, Supplement.* • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Moliavko, *Geologi Biograficheskii*, 1985: p. 79-80. • NDB: 6, 479 [by H. Dolezal]. • Poggendorff: 1, cols. 913-4. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50. • WBI. • *World Who's Who in Science*: 665.

1925. — German, 1751-2.

D. Johann Georg Gmelins, | [...2 lines of titles and memberships...] | Reise | durch | Sibirien, | von dem Jahr 1733. bis 1743. | Erster Theil. | Mit Kupfern. | [ornament] | [rule] | [...2 lines...] | Göttingen, | verlegt Abraham Vandenhoecks seel., Wittwe, 1751.

4 vols. [VOL 1: 1751] 4°: [26], 467 p., 3 folding plates, one map. [VOL 2: 1752] 4°: [32], 652 p., 5 folding plates, one map. [VOL 3: 1752] 4°: [20], 584 p., 7 folding plates, one map. [VOL 4: 1752] 4°: 692, [8] p., 3 folding plates, one map.

VERY SCARCE. In 1733 he was recruited as part of the scientific corps to accompany a trans-Siberian expedition. He proceeded as far as Yakutsk observing the natural history of Siberia. Several maps are included in his report including this description of the Arctic coast. Gmelin compiled in his four-volume *Reise durch Sibirien*, written after his return to Tübingen in 1747. This was the most comprehensive botanical, zoological, geological, topographical, and ethnographic survey of Siberia published up to that time. Gmelin ignored the Academy of Sciences' prohibition against publishing anything about the expedition without special permission, apparently feeling that he could write whatever he pleased since he was back on German soil. His critical comments about the Chancellery's role in the Kamchatka expedition and his graphic descriptions of some of the seamy sides of Siberian

life were shocking and embarrassing to the Russian government. Describes an extensive trip through Siberia, including observations on natural history and mining.

"One of the earliest accounts of Bering's voyage to the Northwest mainland" - Howes. Gmelin was the botanist attached to Vitus Bering's second expedition. He went to eastern Siberia in 1733 as part of the imperial Russian scientific expedition which included Gerhard Müller and astronomer Louis DeLisle. Their original intention was to sail with Bering on his voyage of northeast discovery, but in the event they did not accompany him, working instead in eastern Siberia and along the Lena River. The publications of the scientists attached to the expedition, including Gmelin's travel narrative, constitute much of the earliest material on the discovery and exploration of the Bering Strait and Alaska (see Lada-Mocarski 4-7, 9). Their collective enterprises were the first scientific investigation of the Russian Far East. Gmelin's work is one of the key scientific contributions to the Russian explorations of the 1730s. "Although this work does not contain any material by Gmelin on Alaska proper, it is replete with information on the preparations for Bering's final sea voyage. Altogether, it is indispensable original source material for the study of Bering's second expedition" - Lada-Mocarski. Gmelin also compiled the first comprehensive flora of Siberia, Kamchatka, and the northeastern corner of Asia. After almost a decade in Siberia and the Far East, Gmelin returned to publish his findings, including 1178 species of plants.

Published as *Sammlung neuer und merkwürdiger Reisen zu Wasser und zu Lande*, vols. 4-7.

REFERENCES: BL: [978.k.2-5.]. • LKG: XIV 745.

1926. Dutch transl., 1752-7: *Reize door Siberiën naar Kamschatka, van't jaar 1733 tot 1743. Op allerhoogst bevel van haare Russische Keizerlyke Majesteit gedaan door de heeren Professoren J.G. Gmelin, L. de l'Isle de la Croyere, en Ger. Fr. Muller. In't Hoogduits beschreeven. Vertaald door H. van Elvervelt. Haarlem, Gedrukt by Izaäk en Johannes Enschedé ..., 1752-7.*

4 vols.

VERY RARE. Translation by H. van Elvervelt of *Reise durch Sibirien, von dem Jahr 1733 bis 1743* (4 vols., Göttingen, 1751-2).

REFERENCES: BL: [no copy listed].

1927. — French, 1767.

Voyage en Sibérie; contenant la description des mœurs & usages des peuples de ce pays, le cours des rivières considérables, la situation des chaînes de montagnes, des grandes forêts, des mines, avec tous les faits d'histoire naturelle qui sont particuliers à cette contrée. Traduction libre de l'original allemand par M. de Keralio. Paris: Desaint, 1767.

2 vols. [VOL 1] 12°: xxii, 430, [4] p., one folding plate. [VOL 2] 12°: [4], xx-xxii, [2], 324, [4] p., one plate.

VERY SCARCE. Translation by M. de Keralio. First French edition of this famous book on Siberia translated by de Keralio and being in reality almost a new work

GOBET

in regard to the original German edition of 1752-4.

French translation, abridged from the original German edition of 1751-52.

HOWES G212, "aa." WICKERSHAM 6103. LADA-MOCARSKI 5 (ref).

REFERENCES: BL: [1479.aa.4.]. • Coates, A.M., *The plant hunters. Being a history of the horticultural pioneers, Their quests and their discoveries from the Renaissance to the twentieth century*. New York, McGraw-Hill Book Company, [1970]. 400 p., illus., maps, portraits: [p. 47-50]. • Cox, *Guide to the Literature of Travel*, 1948-50: 1, 351. • LKG: XIV 746a.

GMELIN, Samuel Gottlieb. (BORN: Tübingen, Germany, 23 June 1743; DIED: Darbent, Russia, 27 July 1774) *German naturalist*.

German naturalist and traveller in Russia, nephew of J.G. Gmelin

Samuel Gottlieb (1743-1774), the son of Johann Conrad, was appointed professor of natural history at St Petersburg in 1766, and in the following year started on a journey through south Russia and the regions round the Caspian Sea. On his way back he was captured by Usmei Khan, of the Kaitak tribe, and died from the ill-treatment he suffered, on the 27th of July 1774.

Gmelin was born at Tuebingen in a well known family of naturalists. His father was Johann Conrad Gmelin, an apothecary and surgeon. His uncle was Johann Georg Gmelin. Samuel earned his medical degree in 1763 from the University of Leiden at the young age of 18 (Silva et al., 1996). While living in Holland, Gmelin developed a keen interest in marine algae. In 1766 he was appointed professor of botany at St Petersburg. In the following year he was sent on an expedition to study the natural history of the Russian Empire. He explored the rivers Don and Volga, and the western and eastern coasts of the Caspian Sea. Whilst travelling in the Caucasus he was taken hostage by Usmei Khan of Kha kes and died because of ill treatment in captivity in Derbent. He was only 29 years of age.

Gmelin was the author of *Historia Fucorum* (1768), the first work dedicated to marine biology, dealing exclusively with algae and the first using the binomial system of nomenclature. It includes elaborate illustrations of seaweed and marine algae on folded leaves. However, algal specimens used by Gmelin in the *Historia fucorum* are thought to no longer exist (Dixon & Irvine, 1970). The results of his travels were published in *Reise durch Russland zur tersuchung der drey natur-reiche* (Trip through Russia to study the three natural provinces) (1770-1784, 4 vols.). The final volume was edited by Peter Simon Pallas.

REFERENCES: ADB. • DBA: I 399, 39-45; II 455, 264-275. • Hirsch, *Biographisches Lexikon*, 1884-8. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • NDB. • Poggendorff: 1, col. 914. • WBI.

1928. — German, 1770-84.

Samuel Gottlieb Gmelins, ... Reise durch Russland zur Untersuchung der drey Natur-Reiche. ... St. Petersburg, Gedruckt bey der Kayserl. Academie der Wissenschaften, [1770]-84.

4 vols. [VOL 1: 1770] 4°: [8], 182 p., 39 plates, one map. [VOL 2: 1774] 4°: viii, 260 p., 38 plates. [VOL 3: 1774] 4°: [2], 508 p., 51 plates. [VOL 4: 1784] 4°: [2], xxvi, 218 p., 18 plates.

CONTENTS: Theil 1 : Reise von St. Petersburg bis nach Tscherkask ... 1768 und 1769. Theil 2 : Reise von Tscherkask nach Astrachan und dem Aufenthalt in dieser

Stadt ... 1769-1770. Theil 3 : Reise durch das nordliche Persien 1770-1772. Theil 4 : Reise von Astrachan nach Zarizyn ... 1772-1774. Nebst dem Leben des Verfassers.

VERY SCARCE. Trip through Russia to study the three natural provinces published in 4 volumes.

Fourth volume edited by Peter Simon Pallas [1741-1811].

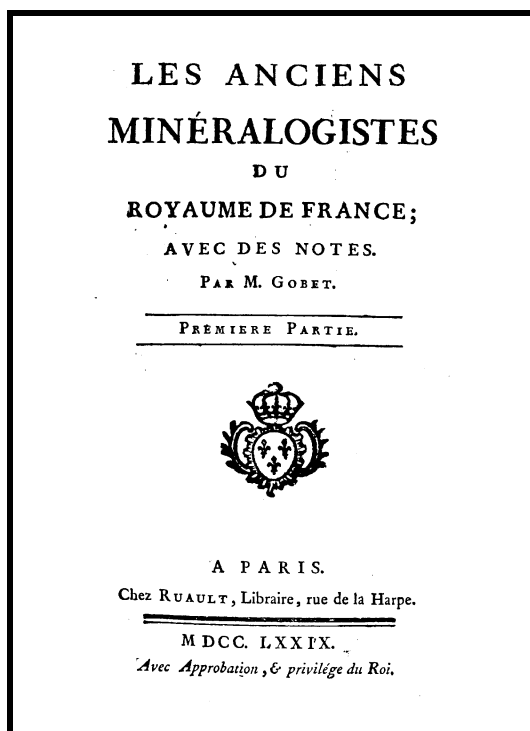
A fourth volume was posthumously published by P. S. Pallas in 1784. This work is a narrative of Gmelin's expedition undertaken by command of the Empress Catherine II 1768?1772. The first volume describes the journey from St. Petersburg to the Don area in 1768?9, while the second deals with the journey to and the stay in Astrakhan in 1769?70. In 1770?2 Gmelin travelled in Northern Persia and was the first naturalist to explore part of this country. Volume three contains some of the results from these regions.

REFERENCES: Anker, *Bird Books and Bird Art*, 1938: 162. • BL: [151.e.11-13.]. • LKG: XIV 749. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88: no. 2049 [collation of plates incorrect].

GOBET, Nicolas. (BORN: 1735?; DIED: Charenton, France, 1778) *French mineralogist & historian*.

Gobet was secretary to the councilor of the Count d'Artois, and guardian of the archives. He wrote on natural history subjects.

REFERENCES: ABF: I 460, 248-252. • *Biographie Universelle*: 17, 3-4. • Lambrecht & Quenstedt, *Catalogus*, 1938: 165. • *Nouvelle Biographie Générale* (Hoefer): 20, col. 866. • Poggendorff: 1, col. 918. • WBI.



LES ANCIENS MINÉRALOGISTES, 1779

1929. — French, 1779.

Les Anciens | Minéralogistes | Du | Royaume De France; | Avec Des Notes. | Par M. Gobet. | [rule] | Premier [-Seconde] Partie. | [rule] | [ornament] | A Paris. | Chez Ruault, Libraire, rue de la Harpe. | [double rule] | M DCC. LXXIXX. | Avec Approbation, & privilège du Roi.

2 vols. [VOL 1] 8°: π^3 a-b⁸ c⁴ A-2E⁸ 2F² 2G²; 248ℓ.; [6], [i]-xxviii, [2], [1]-460 p. [VOL 2] 8°: π^2 a² A-2E⁸; 228ℓ.; [4], [461-910, [2] p. PAGE SIZE: 196 x 128 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Les Anciens | Minéralogistes | Du | Royaume De France; | [rule] | Première Partie. | [rule]," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], Dedication to Comte De Mailly, dated 30 November 1778.; [i]-xxxviii, "Recherches | Historiques."; [2 pgs], Publisher's list.; [1]-458, Text.; [459]-460, "Table | Des Chapitres De La Première | Partie."

[Vol 2] [2 pgs], Half title page, "Les Anciens | Minéralogistes | Du | Royaume De France; | [rule] | Seconde Partie. | [rule]," verso blank.; [2 pgs], Title page, verso blank.; [461]-908, Text.; [909]-910, "Table | Des Chapitres De La Seconde | Partie."; [2 pgs], "Privilege Du Roi."

RARE. Consists of reprints, edited texts and translations of early papers dealing with mining, mineralogy and metallurgy in France.

Volume one contains: François Garrault, *Des Mines d'Argent trouvées en France*. Notice de Gaston Dcilo & de ses Ouvrages. Pierre Belon, *Description des Mines de Sidérocapsa*. Jean de Malus, *Recherches et Découvertes des Mines des Pyrenées*. Jean de Malus, *Avis des riches Mines d'Or, d'Argent, & c. des Pyrenées*. Charles Hautin de Villars, *Mémoire concernant les Mines de France*. M. de Reaumur, *Description d'une Mine de fer du pays de Foix*. M. Hellot, *Sur l'Exploitation des Mines de Baigorri*. M. Meuron de Chateaufort, *Mémoire sur les mines de Baigorri*. *Mémoire sur les Mines de Gascogne*. M. le Monnier, *Des Mines du Roussillon*. Baron & de la Baronne de Beausoleil, *Œuvres Minealogiques*. Diorismus, *Philosophiæ*. Nicolas Gobet, *Reflexions sur le grand œuvre*. Veritable, *Déclaration des Miens & Minieres de France*. *Mines de Bretagne*. *La Restitution de Pluton*. M. Dallet, *Projet pour connitre sans dépense, dans l'espace d'un mois toutes les productions fossiles de la France*.

Volume two contains: César d'Arcons, *Advis sur les mines métalliques*. Jean Astruc, *Description d'une Mine de Plomb, près de Durfort*. Abbé de Sauvages, *Mine de Mercure vierge, de Montpellier*. Abbé de Sauvages, *Du Vitriol de France*. M. Le Monnier, *Des Mines de l'Auvergne*. *Des Mines du Limosin*. M. Desmarest, *Des Mines de la Généralité de Limoges &c.* M. S***, *Observations sur la Mine de Glanges*. M. le Monnier, *Mémoire sur les Mines du Berri*. Antoine de Jussieu, *Observations sur une Mine de Cuivre & de Vitriol des environs de Lyon*. Blumestein & Jars, *Mémoire sur les métaux & minéraux du Lyonnais, Forez & Beaujolois*. Miches Sieur de Serre, *Remonstrance à S.A.R. Gaston, Duc d'Orléans, sur les Mines d'Or &*

d'Argent du Dauphinè. Chambon, *Des Mines d'Or de Tain en Dauphiné, & du Rhône*. *Des Mines d'Argent de Chalances*. M. Courtepee, *Des Mines & Métaux, Carrieres, Marbres, &c. de la Bourgogne*. President Alix, *Dénombrement des Mines d'Or, d'Argent, de Cuivre, de Plomb, &c. du pays & Duché de Lorraine*. François Jean Vic, *Lettre à M. Peiresc sur les curiosités de la Franche-Comté*. F.J. Dunod, *Des Mines du Comté de Bourgogne*. Comte d'Hérouville, *Mémoire sur les Mines d'Alsace*. M. De Genssane, *De l'Exploitation des Mines d'Alface & du Comté de Bourgogne*. *Mines de la Champagne & de la France orientale*. *Description d'un Minéral du pays de Liège, dont on retire du soufre & du vitriol*. *Mines de Flandres, Artois, Boulenois, Picardie*. *Mines de la Généralité de Paris*. L. Savot, *Recherches sur la Métallurgie des Anciens*. Guillaïn, *Le Secret des secrets*.

REFERENCES: Beckmann P.O.B.: 10, 171. • BL. • Dana's 7th (Bibliography): 72. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 332. • Freilich Sale Catalog: no. 214. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 10 & 1, 96. • LKG: XIV 337.

GOEPPERT, Heinrich Robert. (BORN: Sprottau, Niederschlesien, Germany, 25 July 1800; DIED: Breslau, Germany, 18 May 1884) *German physician, pharmacist & paleobotanist*.

Goeppert was professor of medicine and botany at the University of Breslau (now Wroclaw, Poland). From 1852 he was director of the Botanical Gardens at the University.

REFERENCES: *Catalogue of Portraits of Naturalists*: 487 [3 portraits listed]. • *Leopoldina*: 20 (1984), 196-99, 211-14 & 21 (1885), 135-9 & 149-54. • *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*: 1 (1885), 1-5. • Poggendorff: 1, cols. 921-2 & 3, 529. • Sarjeant, *Geologists*, 1980: 2, 1119.

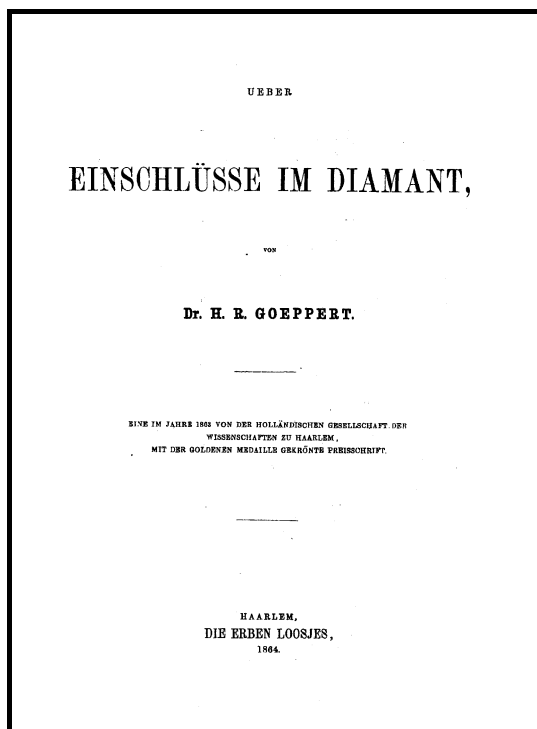
1930. — French, 1864.

Ueber | Einschlüsse Im Diamant, | Von | Dr. H.R. Goeppert. | [rule] | Eine Im Jahre 1863 Von Der Holländischen Gesellschaft Der | Wissenschaften Zu Haarlem, | Mit Der Goldenen Medaille Gekrönte Preisschrift. | [rule] | Haarlem, | Die Erben Loosjes, | 1864.

8°: [I]-V, [6]-84 p., 7 plates (lithographic; showing diamond crystals and inclusions). PAGE SIZE: 294 x 222 mm.

SCARCE. This well researched paper describing various inclusions found in the mineral diamond won a gold medal from the Dutch Society of Science in Haarlem. Goeppert describes and analysis's various diamond inclusions, which to him resemble organic remains, and also gives an account of occurrences of diamond, which at the time were mostly alluvial. In this time prior to the discoveries of the great diamond fields of South Africa, the author puts forth a very convincing case that the carbon inclusions in diamond are organic in nature and that diamonds were created through some type of sedimentary process. However, shortly after this volume appeared the kimberlite pipe of the Dark Continent were found and the true igneous origin of diamond established once and for all time.

GOLDSCHMIDT



UEBER EINSCHLÜSSE IM DIAMANT, 1864



GOLDSCHMIDT

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 2446.

GOLDSCHMIDT, Victor. (BORN: Mainz, Germany, 10 February 1853; DIED: Salzburg, Austria, 8 May 1933) *German mineralogist & crystallographer.*

Goldschmidt began as a student of metallurgy at the Industrial Academy in Berlin and the Freiberg Bergakademie, but in 1880, he graduated with a Ph.D. in mineralogy from the University of Heidelberg. In 1888, he

married Leontine Porges, who supported her husband and his students. In 1888, Goldschmidt also became a faculty member of the University of Heidelberg. There he founded the Mineralogical-Crystallographic Institute.

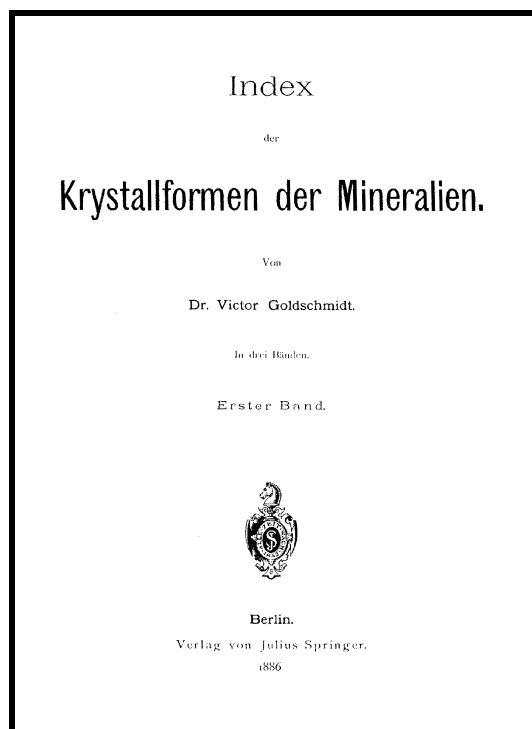
REFERENCES: *American Journal of Science*: 5th Series, 26 (1934), 96. • Barr, *Index to Biographical Fragments*, 1973: 100. • Brunshaw, J., et al., *A la memoire de Victor Goldschmidt. Etudes reunies par Jacques Brunshaw, Claude Imbert et Alain Roger*. Paris, J. Vrin, 1985. 334 p. [In English and French. Bibliographies are included.]. • DBA: II 463, 276-289. • DSB: 5, 455-6 [by G.C. Amstutz]. • NDB: 6, 612 [by F. Herrmann]. • Poggendorff: 3, 530, 4, 510, 5, 435-6 & 6, ??? • Sarjeant, *Geologists*, 1980: 2, 1114 & Suppl. 2 (1996), 1, 661. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 1, 348-51, portrait. • Schlichtenberger, C., "Harmony and complication. The collection of Victor Goldschmidt, founder of the ethnographic museum of the J. u. E. von Portheim-Stiftung in Heidelberg," *Journal of the History of Collections*, 10 (1998), no. 2, 199-206. • WBI. • *World Who's Who in Science*: 672.

1931. Dissertation, 1880: Ueber verwendbarkeit einer Kaliumquecksilberjodidlösung bei mineralogischen und petrographischen Untersuchungen ... Stuttgart: E. Schweizerbart'sche Verlagshandlung (E. Koch), 1880.

8°: [2], 60 p., 3 double-plates (numbered I-III), illus.

RARE. Goldschmidt's inaugural dissertation concerning the accurate determination of the specific gravity of minerals. This is a study he returned to in several articles throughout his career.

REFERENCES: NUC: 204, 613-6 [NG 0294661].



INDEX DER KRISTALLFORMEN, 1886

1932. — German, 1886-91.

Index | der | Krystallformen der Mineralien. | Von | Dr. Victor Goldschmidt. | [rule] In drei Bänden. |

[rule] | Erster [-Dritter] Band. | [ornament] | Berlin.
| Verlag von Julius Springer. | 1886 [-1891].

3 vols. [VOL 1] π^5 1-378 385; ?? ℓ .; [i]-x, [1]-601 (pages 593-601 printed recto only) p., 99 text illus., tables, diagms., biblio. (pages 150-53). [VOL 2] π^2 1-358 364; ?? ℓ .; [4], 1-546 p., tables.; [VOL 3] π^4 1-318 χ^1 ; ?? ℓ .; [i]-vii, [1] blank, 1-420 (pages 397-420 printed recto side only) p., tables. PAGE SIZE: 245 x 162 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "Wilhelm Gronau's Buchdruckerei in Berlin."; [iii], Dedication to Albin Weisbach.; [iv], Blank.; [v]-vi, "Vorwort."—dated August 1886.; [viii]-x, "Inhalt des ersten Bandes."; [1]-156, Introductory text.; [157], "Index."; [158], Blank.; 159-592, Tables of crystal forms for the minerals abichite to euxenite.; [593]-601, "Correcturen und Nachträge."

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], "Vorbemerkung"—dated April 1890.; [1 pg], Blank.; 1-546, Tables of crystal forms for the minerals "Fahlerz" (tetrahedrite) to babingtonite.

[Vol 3] [i-ii], Title page, verso blank.; [iii]-v, "Vorwort."—dated May 1891.; [vi], "Inhalt des dritten Bandes."; vii, "Erklärung und Zeichen."; [1 pg], Blank.; 1-362, Tables of crystal forms for the minerals quartz to zunyite.; [363], "Anhang."; [364], "Der Anhang enthält die Mineralien mit unvollständig bestimmten Elementen, ..."; [365]-391, Text.; [392]-396, "Synonyme."; [397]-420, "Correcturen und Nachträge."

VERY SCARCE. A remarkable crystallographic work that attempted to index every mineral crystal form. In volume one, the first 156 pages are devoted to a treatise on crystallography that was also separately published as *Einleitung in die formbeschreibende Krystallographie* (Berlin, 1887) [which see next entry]. This introductory section covers symbols, projections, transformations, calculation of elements, tables, and abbreviations. Next follows the systematic data for minerals arranged alphabetically from abichite to euxenite. For each mineral listed the crystal system, axial ratios, cell elements, etc. are given. The next two volumes continue these listings for the other minerals. At the conclusion of volume three is a supplement listing synonyms and corrections. The work was issued in a series of sections. Volume one appeared in two Lieferungen 1. *Einleitung* & 2. *Abichit to Euxenit*. Volume two was published in seven Hefts covering the minerals *Fahlerz* to *Pyroxen*. The concluding volume also appeared in 7 Hefts, with the first 6 dealing with the minerals *Quarz* to *Zunyt*. The last Heft was a supplement.

REFERENCES: *American Journal of Science*: 3rd Series, **35** (1888), 501. • Dana's 7th (Bibliography): **72**. • NUC: **204**, 613-6 [NG 0294647].

1933. — German, 1887.

Einleitung in die formbeschreibende Krystallographie ... Sonderausgabe der Einleitung zum Index der Krystallformen der Mineralien. Berlin, Julius Springer, 1887.

8°: [4], 156 p., 92 text illus.

VERY SCARCE. This work is the separately issued introduction to Goldschmidt's *Index der Krystallformen der Mineralien* (3 vols., Berlin, 1887-91) [which see entry above], with a different title page.

REFERENCES: NUC: **204**, 613-6 [NG 0294640].

1934. — German, 1887.

Krystallographische Projectionsbilder, von Dr. Victor Goldschmidt. Zum Theil in Farbendruck. Berlin, Julius Springer, 1887.

[Text] 4°: 15, [1] p.; [Atlas] 2°: [2], XIX (i.e., 21) plates. PAGE SIZE: Text: 230 x 180 mm.; Atlas: 780 x 680 mm.

PLATES: The plates comprise: I. Pyrit. Gnomonische Projection der bekannten Formen. II. Pyrit. Punktbild. III. Calcit. Gnomonische Projection IV. Calcit. Punktbild. V. Rothgiltigerz. Gnomonische Projection der bekannt Formen. VI. Rothgiltigerz. Punktbild. VII. Pyrit, Calcit, Rothgiltigerz. Mittelfelder in grössere Massstab. (Ergänzungsblatt.) VIII. Eisenglanz. Gnomonische Projection der bekannten Formen. IX. Eisenglanz. Punktbild. X. Quarz. Gnomonische Projection der bekannten Formen. XI. Quarz. Punktbild. XII. Quarz. Mittelfeld in grösserem Massstab. XIII. Bournonit. Gnomonische Projection der bekannten Formen. XIV. Bournonit. Punktbild. XV. Humit-Gruppe: Humit, Klinohumit, Chondrodit. Gnomonische Projection der bekannten Formen. XVI. Humit-Gruppe: Humit, Klinohumit, Chondrodit. Punktbild mit optischen Abmessungen. XVII. Magnetisenerz, Beryll, Idokras, Baryt, Epidot, Axinit. Beispiele für die Anwendung rastrirter Blätter zur Darstellung von Projectionsbildern. XVIII. Amphibol. Ableitung des perspectivischen und des horizontalen Bildes aus dem gnomonischen Projectionsbild. XIX. Anorthit. Zwillingsbilder in gnomonischer Projection. Albit-Gesetz, Manebacher-Gesetz. Calcit, Rothgiltigerz, Eisenglanz, Quarz. Linienbilder der wichtigsten Zonenentwicklung. Beilagen I. Hexagonales Netz. Beilagen II. Tetragonales Netz.

VERY RARE. This rare set is an exceptional and unique work in crystallography. It was a by-product of Goldschmidt's extraordinary compilation *Index der Krystallformen der Mineralien* (3 vols., Berlin, 1886-91), which listed the known crystal forms for many minerals. The *Krystallographische Projectionsbilder* uses the forms of some of the minerals listed in the earlier work and plots them in goniometric projection. Because the minerals Goldschmidt choose to publish in this fashion had tremendous variety in their crystal forms, the only practical method of conveying the rich variety of forms on one projection was to use a very large format in the publication of the atlas, and it is. Measuring 78 x 68 cm, or over 2.5 x 2 feet, the plates of this work display the culmination of goniometric projection. In the time preceding x-ray diffraction, the only method available to describe the exact symmetry of crystallographic data was to measure crystal faces on a goniometer. The measurements obtained were then conveyed to other researchers in a number of ways the most computational of which was the goniometric projection. This procedure involved projecting an imaginary axis orthogonal from a measured crystal face to the surface of a hemisphere lying outside the crystal. Where the axis projection intersected the sphere an imaginary point was created on the surface of the sphere. These points were then plotted on to a special graph known as a Wulff net. By this means a simplified visual picture of the crystal symmetry and form is produced. In addition, if other crystal forms of the

GOLDSCHMIDT

same mineral are projected on to the same circle, a very visual, simplified picture of all the species crystal forms is created. This allowed any research who thought they had discovered a new crystal form to check its projection against Goldschmidt's work and quickly determine if in fact a new form had been discovered.

REFERENCES: BL: [no copy listed]. • NUC: **204**, 613-6 [NG 0294648].

1935. — German, 1887.

Ueber krystallographische demonstration mit Hilfe von Korkmodellen mit farbigen Nadelstiften. Von Dr. Victor Goldschmidt ... Berlin, Julius Springer, 1887.

8°: 20 p., 6 colored plates (numbered I-VI).

VERY SCARCE. An ingenious device for the purpose of demonstrating by use of cork blocks with needles bearing colored heads to show the symmetry of the different crystal systems and the relation of the forms belonging to them.

REFERENCES: *American Journal of Science*: 3rd Series, **35** (1888), 501. • NUC: **204**, 613-6 [NG 0294659].

1936. — German, 1887.

Ueber projection und graphische Krystallberechnung. Von Dr. Victor Goldschmidt ... Berlin, Julius Springer, 1887.

8°: [2], [4], 97, [2] p., 123 text illus.

VERY SCARCE. The scheme of notation with the methods of projection and calculation that Goldschmidt had developed in the introduction to his *Index der Krystalformen* (3 vols., Berlin, 1886-91) is further elucidated in this work.

REFERENCES: *American Journal of Science*: 3rd Series, **35** (1888), 501. • NUC: **204**, 613-6 [NG 0294660].

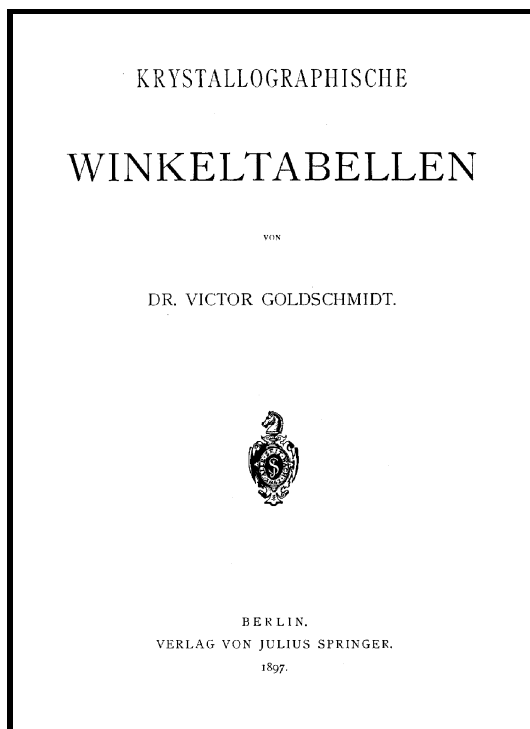
1937. — German, 1897.

Krystallographische | Winkeltabellen | von | Dr. Victor Goldschmidt. | [ornament] | Berlin. | Verlag Von Julius Springer. | 1897.

4°: π^1 1-278; 217 ℓ .; [2], [1]-432 p., folding diagram (page 19, labeled 19a & 19b), 25 illus., index. PAGE SIZE: 252 x 175 mm.

CONTENTS: [2 pgs], Title page, verso "Alle rechte, insbesondere das der Übersetzung in fremde Sprachen vorbehalten. | ..."; [1]-26, "Einleitung."—dated 16 July 1896.; [27], "Winkeltabellen."; [28], Blank.; 29-380, Text (tables of mineral crystal forms).; [381], "Anhang. | Bemerkungen und Correcturen."; [382], Blank.; 383-426, Text of commentary and corrections.; [427]-432, "Synonyme. | ..."

VERY SCARCE. *Krystallographische Winkeltabellen* presented for the first time a complete table of angles for all the crystal forms of all crystallized mineral species. Such tables were useful to the crystallographer to determine without calculation whether the forms observed on a crystal were already known or were new. Short approximations to these tables had appeared within monographs for single mineral species, but no one before this work had attempted the mineral kingdom as a whole. It had been impractical because the prevailing method was to list the interfa-

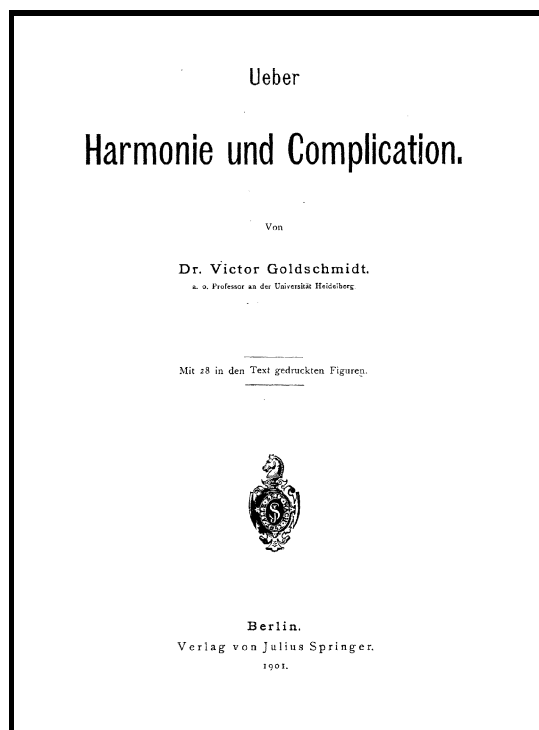


KRYSTALLOGRAPHISCHE WINKELTABELLEN, 1897

cial measurements between crystal faces which for any given form required an enormous number of angles to be given. However, the invention of the two-circle goniometer first proposed by Evgraf S. Fyodorov [q.v.] and constructed by the mechanic Peter Stoë [?-1931] for Goldschmidt allowed each face of a crystal to be measured independently of all others. The crystal's position was determined with reference to a fixed pole and meridian by two angular coordinates making it possible to create a complete table of angles. For such a table now need only contain for each form two angular values, r and f (corresponding to geographical longitude and latitude for a point on the earth's surface). *Krystallographische Winkeltabellen* contain these values for each well established crystal form of each mineral calculated from the axial elements of the substance and the symbol of the form. There are also given for each form several angles that facilitate the comparison of these angular coordinates with the results of the ordinary interfacial measurement. Lastly a set of linear coordinates enable the rapid plotting of the form in a gnomonic projection. The introduction to the work gives the necessary explanations of the values contained in the work, and the schemes employed in each system for the calculation of the values are shown. Some idea of the enormous labor employed by Goldschmidt in this work is given by the statement that it contain upwards of 70,000 values. Of this number about half are values recurring more or less often, such as angles of 45° and 60°, but of the remaining each required a separate calculation. An appendix

contains notes on the various minerals, indicating the particular orientation adopted in each case.

REFERENCES: *American Journal of Science*: 4th Series, **5** (1898), 153-4 [by C. Palache]. • *Mineralogical Magazine*: **12** (18??), 43 [by H.A. Miers]. • NUC: **204**, 613-6 [NG 0294649].



UEBER HARMONIE UND COMPLICATION, 1901

1938. — German, 1901.

Ueber | Harmonie und Complication. | Von | Dr. Victor Goldschmidt. | a.o. Professor and der Universität Heidelberg. | [rule] | Mit 28 in den Text gedruckten Figuren. | [rule] | [ornament] | Berlin. | Verlag von Julius Springer. | 1901.

8°: π^3 1-8⁸ 9⁵; 72 ℓ .; [i]-iv, [1] contents, [1] blank, [1]-136, [2] p., one folding musical sheet as an extension of the leaf containing pages 53 & 54. PAGE SIZE: 252 x 174 mm.

CONTENTS: [i-ii], Title page, verso two quotes (one from Goethe, the other from Pythagoras).; [iii]-iv, "Vorwort.;" [1 pg], "Inhalt."—signed V. Goldschmidt, December 1901.; [1 pg], Blank.; [1]-136, Text.; [2 pgs], Publisher advertisements for the author's other works published by Julius Springer in Berlin.

VERY SCARCE. In this strange theoretical crystallography, Goldschmidt attempts to relate musical harmony with the symmetry of crystals and the preception of color. As a counterpoint he then discusses complications found in nature, art and counting systems. Goldschmidt wrote in the preface that the essentials of this book had been written down by 1893, but in an effort to make this complex thesis

more complete, he had continued to add new material until publication.

REFERENCES: *American Journal of Science*: 4th Series, **12** (1901), 325. • NUC: **204**, 613-6 [NG 0294658].

1939. — German, 1902.

Erinnerungsblätter an Albin Weisbach, Geheimen Bergrath und Professor der Mineralogie an der Kgl. Bergakademie in Freiberg in Sachsen. Von Dr. Victor Goldschmidt ... Freiberg in Sachsen, Craz & Gerlach, 1902.

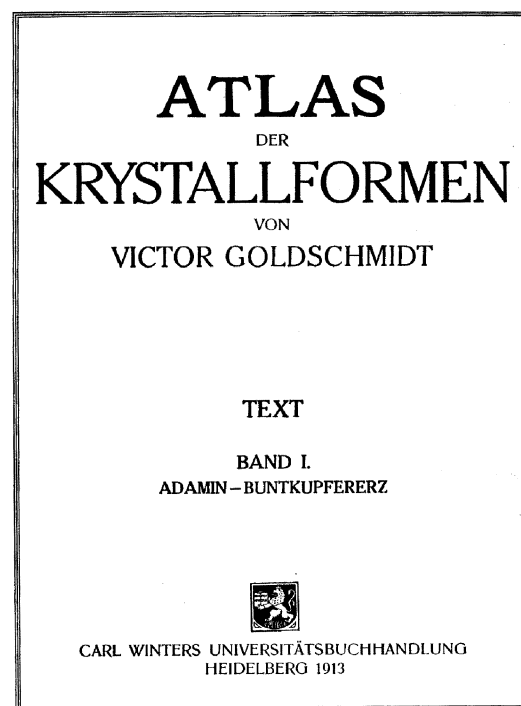
8°: 30 p., frontispiece (portrait of Weisbach).

VERY SCARCE. Memorial to ALBIN WEISBACH prepared by his favorite student. Weisbach was a great influence in Goldschmidt's life. While attending the University of ???, Goldschmidt came under Weisbach's influence. Goldschmidt was so inspired, he decided to make the study of crystallography his life's work. The relationship between these two is also clearly shown by Goldschmidt's dedication of the *Index der Kristallformen der Mineralien* to Weisbach.

REFERENCES: NUC: **204**, 613-6 [NG 0294642].

Der Diamant. Eine Studie von A. von Fersmann und V. Goldschmidt ... Mit einem Atlas von 43 Tafeln. (Heidelberg, 1911).

See: Fersman, Aleksandr Evgenievich.



ATLAS DER KRYSTALLFORMEN, 1913

1940. — German, 1913-23.

[Contained within a triple rule box:] Atlas | Der | Krystallformen | Von | Victor Goldschmidt | Text [-Tafeln] | Band I. [-IX.] | Adamin-Buntkupfererz

GOLDSCHMIDT

[-Trechmannit-Zoisit]. | [ornament] | Carl Winters
Universitätsbuchhandlung | Heidelberg 1913 [-
1923].

9 vols. bound in 18. [VOL 1: 1913] (Text) 4°: [2], [i]-vi, 1-248 p., tables.; (Plates) 4°: [4] p., plates 1-244.; [VOL 2: 1913] (Text) 4°: [2], 1-200 p., tables.; (Plates) 4°: [2] p., plates 1-251, [1] blank p.; [Vol 3: 1916] (Text) 4°: [2], 1-240 p., tables.; (Plates) 4°: [2] p., plates 1-247, [1] blank p.; [Vol 4: 1918] (Text) 4°: [2], 1-212 p., tables.; (Plates) 4°: [2] p., plates 1-133, [1] p.; [Vol 5: 1918] (Text) 4°: [2], 1-199, [1] p., tables.; (Plates) 4°: [2] p., plates 1-123, [1] p.; [Vol 6: 1920] (Text) 4°: [2], 1-208 p., tables.; (Plates) 4°: [2] p., plates 1-144.; [Vol 7: 1922] (Text) 4°: [2], 1-175, [1] p., tables.; (Plates) 4°: [2] p., plates 1-159, [1] blank p.; [Vol 8: 1922] (Text) 4°: [2], 1-195, [1] p., tables.; (Plates) 4°: [2] p., plates 1-149, [1] p.; [Vol 9: 1923] (Text) 4°: [2], 1-192, [2] p., tables.; (Plates) 4°: [2] p., plates 1-128.

CONTENTS: [Vol 1] (Text) [2 pgs], Title page, verso blank.; [i], Dedication to Mrs. Goldschmidt.; [iii], Blank.; [iv]-vi, "Vorwort zum ersten Band."—dated November 1912.; 1-248, Text, "Adamin—Buntkupfererz."; (Plates) [2 pgs], Title page, verso blank.; [1 pg], Dedication to Mrs. Goldschmidt.; [1 page], Blank.; 1-244, Plates.

[Vol 2] (Text) [2 pgs], Title page, verso blank.; 1-200, Text, "Calaverit—Cyanochorit."; (Plates) [2 pgs], Title page, verso blank.; 1-251, Plates.; [1 pg], Blank.

[Vol 3] (Text) [2 pgs], Title page, verso blank.; 1-240, Text, "Danalith—Feldspatgrappe."; (Plates) [2 pgs], Title page, verso blank.; 1-247, Plates.; [1 pg], Blank.

[Vol 4] (Text) [2 pgs], Title page, verso blank.; 1-212, Text, "Fergusonit—Ixionolith."; (Plates) [2 pgs], Title page, verso blank.; 1-133, Plates.; [1 pg], "C.F. Wintersche Buchdruckerei."

[Vol 5] (Text) [2 pgs], Title page, verso blank.; 1-199, Text, "Kainit—Margarosanit."; [1 pg], "C.F. Wintersche Buchdruckerei."; (Plates) [2 pgs], Title page, verso blank.; 1-123, Plates.; [1 pg], "C.F. Wintersche Buchdruckerei."

[Vol 6] (Text) [2 pgs], Title page, verso blank.; 1-208, Text, "Markesit—Pyrit."; (Plates) [2 pgs], Title page, verso blank.; 1-123, Plates.; [1 pg], "C.F. Wintersche Buchdruckerei."

[Vol 7] (Text) [2 pgs], Title page, verso blank.; 1-175, Text, "Pyroaurit—Rutil."; [1 pg], "C.F. Wintersche Buchdruckerei."; (Plates) [2 pgs], Title page, verso blank.; 1-159, Plates.; [1 pg], Blank.

[Vol 8] (Text) [2 pgs], Title page, verso blank.; 1-195, Text, "Safflorit—Topas."; [1 pg], "C.F. Wintersche Buchdruckerei."; (Plates) Pp. [2 pgs], Title page, verso blank.; 1-149, Plates.; [1 pg], "C.F. Wintersche Buchdruckerei."

[Vol 9] (Text) [2 pgs], Title page, verso blank.; 1-158, Text, "Trechmannit—Zoisit."; [159], "Nachträge."; [160], Blank.; 161-172, Text of Nachträge.; [173]-192, "Synonyme."; [1], "Schlußwort."—dated 28 March 1923.; [1 pg], "C.F. Wintersche Buchdruckerei."; (Plates) [2 pgs], Title page, verso blank.; 1-114, Plates.; [1 pg], "Nachträge."; [1 pg], Blank.; 117-128, Plates of Nachträge.

RARE. The encyclopedia of crystal morphology, whose purpose was to collect, index and reproduce in one work all the crystal forms observed for every mineral species. In 1913, a *Prospectus* for this work consisting of 8 pages of text and 8 plates was given a lengthy notice in the *American Journal of Science* [See: *4th Series*, **35**, 553]. After reminding the readers that a previous attempt by ALBRECHT SCHRAUF to publish such an atlas had collapsed after only a single volume

had appeared, the review goes on: "... the work will embrace from 25,000 to 28,000 figures; these will be included in five or six volumes of about 250 plates each, with a like number of volumes of text." One wonders if the readers of this notice actually expected to see Goldschmidt's *Atlas* to be completed. Most probably did not realize this was the keystone to the author's crystallographic work. With the *Index der Krystallformen der Mineralien* (3 vols., Berlin, 1886-91) and *Kristallographische Winkeltabellen* (Berlin, 1897), it forms the last segment of a trilogy Goldschmidt had intended to publish from the start of his career, and which incidentally defined modern crystal morphological studies. In the preface to the text, Goldschmidt explains the broad standpoint that has led him to develop this work. His desire was to bring together the material necessary for solving many of the problems of crystals and their growth, particularly with respect to habit, the frequency of occurrence of certain forms and the relative size of the faces. The tremendous depth of the work is astonishing, with most mineral species represented by several hundred to a few thousand crystal drawings. The reproduction of these figures is excellent as well. Goldschmidt did not attempt to redraw each of these figures as Schrauf had done. Instead original figures were reproduced by the printer using photographic techniques onto the zinc plates used for printing. This enabled Goldschmidt to size, adjust and rotate the original drawings as needed. The text is arranged alphabetically by mineral name, and consists of two parts. The first and most important of these are the plates, for they create the esthetic value of the work. Reproductions of many thousands of crystal drawings illustrate graphically all the variations in form observed for every mineral. Supporting these figures is the text, which lists the various characteristics of the minerals, and gives a detailed accounting of the locality and exact reference sources for each figure pictured.

REFERENCES: *American Journal of Science*: 4th Series, **35** (1913), 553 [Prospectus], **36** (1913), 313 [Vol. 1] & **37** (1913), 284 [Vol. 2]. • Dana's 7th (Bibliography): 72.

1941. — German, 1928.

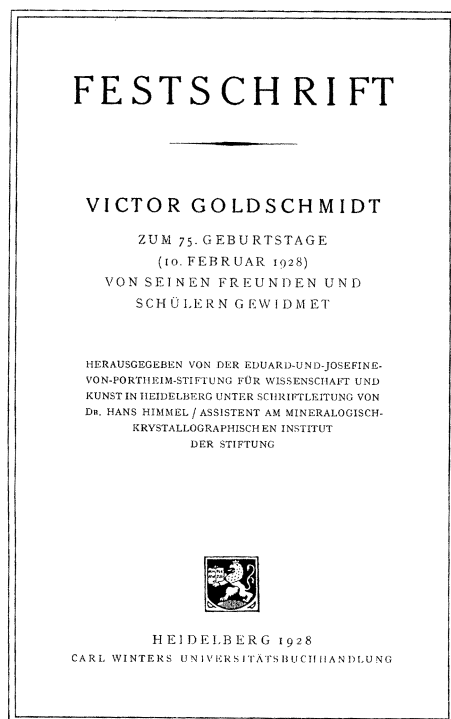
Special Publication No. 2 | The Academy of
Natural Sciences of Philadelphia | Crystallographic
| Tables | For The | Determination Of Minerals
| By | Victor Goldschmidt (Heidelberg) | and
| Samuel G. Gordon (Philadelphia) | [rule] |
Philadelphia | 1928.

8°: 70 p., tables, diagrams.

VERY SCARCE. Co-authored with SAMUEL G. GORDON, this book was published as the Academy of Natural Sciences of Philadelphia's special publication number 2. It lists in tables the minerals whose crystal system and axial elements were known at the time of publication. The polar elements are arranged in a regular series such that having measured the angles of a crystal it was possible to quickly locate its place in the table. Allowances were made for the possible variations in orientation. In addition to the crystallographic

data a brief statement concerning the physical and chemical properties of each species is given to aid in its identification.

REFERENCES: *American Journal of Science*: 5th Series, 15 (1928), 449. • Dana's 7th (Bibliography): 72. • NUC: 204, 613-6 [NG 0294638].



FESTSCHRIFT, 1928

1942. — German, 1928.

[Contained within a double rule box:] Festschrift | [tapered rule] | Victor Goldschmidt | Zum 75. Geburtstag | (10. Februar 1928) | Von Seinen Freunden Und | Schülern Gewidmet | Herausgegeben Von Der Eduard-Und-Josefine-Von-Portheim-Stiftung Für Wissenschaft Und | Kunst In Heidelberg Unter Schriftleitung Von | Dr. Hans Himmel / Assistant Am Mineralogisch-Krystallographischen Institut | Der Stiftung | [ornament] | Heidelberg 1928 | Carl Winters Universitätsbuchhandlung.

8°: π^2 1-178 183; 141*l.*; [i]-iv, [1]-275, [3] p., frontispiece (portrait of Goldschmidt), 10 plates (one folding), text illus., biblio. of Goldschmidt's writings to 1928. PAGE SIZE: 245 x 174 mm.

CONTENTS: [Facing the title page is a frontispiece portrait of Goldschmidt.]; [i-ii], Title page, verso blank.; [iii]-iv, "Inhalt."; [1]-275, Text.; [1 pg], "Nachwort."—signed Hans Himmel.; [1 pg], "Tafeln."; [1 pg], "Erklärung Zu Tafel I."; [At end], 10 plates, numbered I to X (Plate X folding).

VERY SCARCE. Edited by Hans Himmel [1897-?]. This handsome work was published to commemorate the anniversary of Goldschmidt's birth. It begins with a somewhat overglowing review of Goldschmidt's life and contributions by L. Milch. Next comes a chronological listing compiled by Himmel of Goldschmidt's 177 publications printed from 1876 to 1925. Following this are 32 papers published in the native languages of the authors on various mineralogical and crystallographic subjects. The tremendous influence Goldschmidt had as a teacher is somewhat indicated by the five languages reproduced in the papers. Each of the authors was either a former student of Goldschmidt's or a professional colleague, many making their own important contributions to these sciences.

REFERENCES: NUC: 204, 613-6 [NG 0294632].

1943. — German, 1934.

Kursus der Kristallometrie | von | Dr. Victor Goldschmidt† | Geheimem Hofrat, Dr. iur. h.c., Dr. ing. e.h., o. Honorarprofessor | an der Universität Heidelberg | Aus dem Nachlaß herausgegeben von | [Set in twocolumns] Dr. Hans Himmel | [...4 lines of titles and memberships...] | und | Dr. Karl Müller | [...4 lines of titles and memberships...] | [rule] | Mit 183 Textfiguren | [rule] | Berlin | Verlag von Gebrüder Borntraeger | W 35 Schöneberger Ufer 12a | 1934.

8°: π^4 1-108 116; 90*l.*; [i]-[vii], [1], [1]-167, [1] blank, [4] publisher's list p., subject index, 183 text illus., tables. PAGE SIZE: 241 x 156 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, insbesondere das Recht der Übertragung in fremde Sprache, vorbehalten ..."; [iii], "Vorbemerkung der Herausgeber."—dated September 1933.; [iv]-v, "Vorwort."—signed V. Goldschmidt, Heidelberg 30 May 1932.; [vi]-vii, "Inhalt."; [1 pg], "Arbeitsregeln."; [1]-160, Text.; 161-162, "Anhang I. Sehnen-Tangententabelle ..."; 163-164, "Anhang II. Winkeltabelle für das reguläre System bei Aufstellung O_2 ..."; [165]-167, "Sachregister."; [1 pg], Blank.; [4 pgs], "Verlag von Gebrüder Borntraeger in Berlin ..."

VERY SCARCE. Edited and published posthumously from a nearly complete manuscript by Hans Himmel [1897-?] and Karl Müller [?-?]. Goldschmidt's last work is designed as a an authoritative textbook of crystal measurement using one and two circle goniometers. Coming from one of the great practitioners of the art, it is perhaps the finest monograph on the subject. The work gives instruction by the same methods Goldschmidt had applied in teaching forty years worth of post graduate students in his laboratory. It is divided into two sections. The first, the introduction, describes methods of generating gnomonic, stereographic and orthoscopic projections of crystals. The second covers the measurement of crystals on one and two circle goniometers. By using examples of increasingly complex crystal forms, the theories discussed in the text are reinforced by application. It concludes with examples of measuring twinned crystals. Within the discussion are references to crystal models, crystal making apparatus, and goniometers. The numerous

GOLITSYN

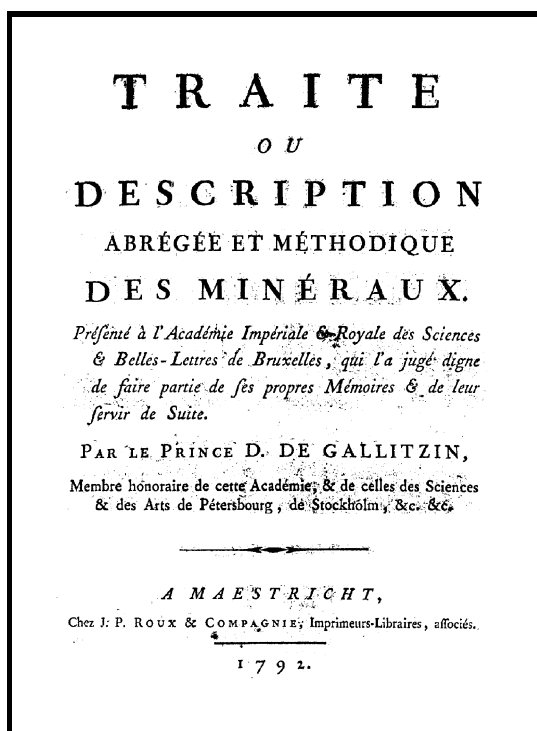
text illustrations show figures of the apparatus, crystal figures and various projections.

REFERENCES: Dana's 7th (Bibliography): 72. • NUC: 204, 613-6 [NG 0294650].

GOLITSYN (Gallitzin), Dmitrii Alekseyevich. (BORN: Russia, 21 December 1763 and later in 1773 at the Hague. He retired to Braunschweig. Golitsyn was a member of many different learned societies and author of a number of scientific publications, especially in the field of mineralogy. He bequeathed his mineral collection (30,000 specimens) and library to the JENA MINERALOGICAL SOCIETY, which was subsequently disbanded. The collection has since been dispersed into the general collection of the University of Jena.

Golitsyn (French: Gallitzin) was appointed Russian ambassador at Paris in 1763 and later in 1773 at the Hague. He retired to Braunschweig. Golitsyn was a member of many different learned societies and author of a number of scientific publications, especially in the field of mineralogy. He bequeathed his mineral collection (30,000 specimens) and library to the JENA MINERALOGICAL SOCIETY, which was subsequently disbanded. The collection has since been dispersed into the general collection of the University of Jena.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 100. • *Nouvelle Biographie Générale* (Hofer): 16, 342. • Poggendorff: 1, cols. 836-7. • Wilson, W.E., "Dmitrii Alekseevich Golitsyn (1734-1803), his life and works," *Matrix*, 2 (1991), 49-55. • Wilson, *History of Mineral Collecting*, 1994: 128 & 173.



TRAITÉ OU DESCRIPTION, 1792

1944. — French, 1792 [First edition].

Traité | ou | Description | Abrégée Et Méthodique | Des Minéraux. | Présenté à l'Académie Impériale & Royale des Sciences | & Belles – Lettres de Bruxelles, qui l'a jugé digne | de faire partie de ses propres Mémoires & de leur | servir de

Suite. | Par le Prince D. De Gallitzin, | [...2 lines of titles and memberships...] | [ornate rule] | A Maestricht, | Chez J.P. Roux & Compagnie, Imprimeurs-Libraires, associés. | [rule] | 1792.

4°: π^2 A-Z⁴ Aa-Gg⁴ Hh²; 124ℓ.; [4], [1]-244 p. PAGE SIZE: 257 x 200 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Errata."; [1]-233, Text.; [234], Blank.; [235]-244, "Arrangement Méthodique | Des Minéraux."

VERY SCARCE. In this methodical arrangement of mineralogy, the minerals are arranged into a natural history structure based on Orders, Classes, Families and Species. In the introduction, the author notes the great prevalence of quartz around the globe. It is found in every environment from mountain tops to the sands of the oceans. He then concludes that it would be appropriate to create a systematic classification of minerals based on the relative proportions of various materials found within the earth. Thus, the most common material, quartz, will head the system, with other substances found in lesser amounts listed below. Here Golitsyn utilizes the eight Orders of (1) Quartz, (2) Native metals, (3) Calcium minerals, including gypsum, calcite, marble, stalactites, etc., (4) Products of vegetables and animals, (5) Acids, (6) Mixtures, including zeolites, lapis-lazuli, fluorite, concretions, etc., (7) Combinations of metals and semi-metals, including pyrite, argentite, cuprite, oxides of lead, copper, bismuth, nickel, manganese, and (8) Products of volcanoes. Synonyms to mineral names are provided, and footnotes cite authorities for text comments.

REFERENCES: Beekman, *Systematische Mineralogie*, 1906: 94-6. • Hoover Collection: no. 373. • LKG: XII 132. • Roller & Goodman, *Catalogue*, 1976: 1, 470. • Sinkankas, *Gemology Bibliography*, 1993: no. 2294 [not seen].

1945. 2nd edition, 1794: Traité ou description abrégée et méthodique des minéraux présenté à l'Académie Impériale & Royale des Sciences & Belles-Lettres de Bruxelles, qui l'a jugé digne de faire partie de ses propres mémoires & de leur servir de suite par le Prince D. de Gallitzin ... Neuwied sur le Rhin, Chez la Société Typographique, 1794.

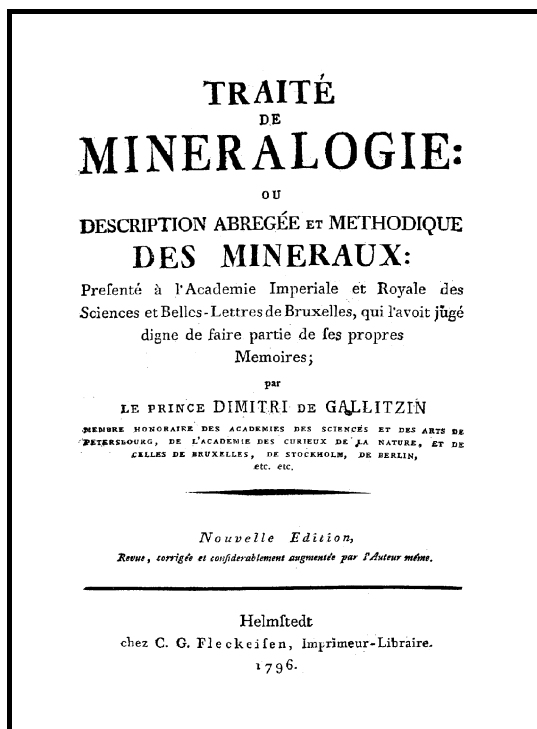
4°: A-Ff⁴ Gg-Ii²; ??ℓ.; vi, [7]-245 [i.e. 241], [3] p. Page 139 incorrectly numbered 913 and page 241 numbered 245. Errata: p. [242]. VERY SCARCE.

1946. 3rd edition, 1796: Traité | De | Mineralogie: | Ou, | Description Abregée et Methodique | Des Minéraux: | Présenté à l'Académie Imperiale et Royale des | Sciences et Belles-Lettres de Bruxelles, qui l'avoit jugé | digne de faire partie de ses propres | Memoires; | par | le Prince Dimitri de Gallitzin | [...4 lines of titles and memberships...] | [tapered rule] | Nouvelle Edition, | Revue, corrigée et considerablement augmentée par l'Auteur même. | [rule] | Helmstadt | chez C.G. Fleckeisen, Imprimeur-Libraire. | 1796.

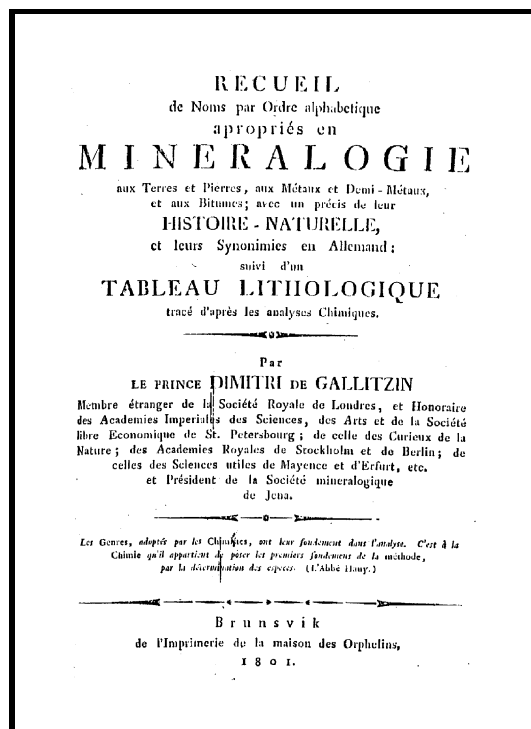
4°: *³ A-Z⁴ Aa-Zz⁴ Aaa⁴ Bbb³; 194ℓ.; [6], [1]-380, [2] p. PAGE SIZE: 202 x 152 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], Dedication to the Marquise de Nadaillac, signed Dimitri P. de Gallitzin.; [1]-6, "Introduction."; [7]-368, Text.; [369]-380, "Tables des Matieres contenues dans ce Volume."; [1 pg], Errata.; [1 pg], Blank.

SCARCE. Here Golitsyn retains the classification system proposed in the first edition, while attempting to justify its merits through additional examples and added species.



TRAITÉ DE MINÉRALOGIE, 1796



RECUEIL DE NOMS, 1801

REFERENCES: LKG: XII 132. • Sinkankas, *Gemology Bibliography*, 1993: no. 2294 [not seen].

1947. — French, 1801 [First edition].

Recueil | de Noms par Ordre alphabétique | appropriés en | Mineralogie | aux Terres et Pierres, aux Métaux et Demi-Métaux, | et aux Bitumes; avec un précis de leur | Histoire - Naturelle, | et leurs Synonymies en Allemand: | suivi d'un | Tableau Lithologique | tracé d'après les analyses Chimiques. | [ornate rule] | Par | le Prince Dimitri de Gallitzin | [...7 lines of titles and memberships...] | [ornate rule] | [...3 lines of quotation, signed Haüy...] | [ornate rule] | Brunsvik | de l'Imprimerie de la maison des Orphelins, | 1801.

4°: *4 A-Qq⁴ Rr⁵; 165ℓ.; [i]-viii, [1]-320, [2] p. PAGE SIZE: 194 x 162 mm.

RARE. A large, comprehensive mineralogical dictionary, that is encyclopedic in nature. Its rarity may be a result of a stopped production, with the appearance of HAÜY's *Traité de Minéralogie* and its reform of nomenclature being the cause. It is clear from the entries that Golitsyn was a proficient mineralogist with a keen instinct for including the best information. The species and varieties are named in French, with synonyms in German and other common names, then under each entry details on identification and physical properties, citing other authorities.

REFERENCES: Dana's 7th (Bibliography): 71. • LKG:

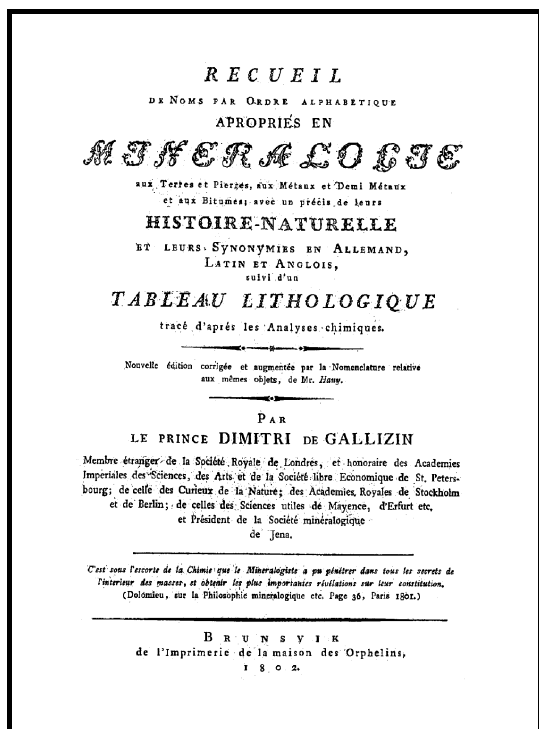
VIII 12. • Partsch, *Katalog der Bibliothek*, 1851: no. 140. • Sinkankas, *Gemology Bibliography*, 1993: no. 2296.

1948. 2nd edition, 1802: Recueil | de Noms par Ordre alphabétique | Appropriés En | Mineralogie | aux Terres et Pierres, aux Métaux et Demi-Métaux | et aux Bitumes; avec un précis de leur | Histoire-Naturelle | et leurs Synonymes en Allemand, | Latin et Anglois, | suivi d'un | Tableau Lithologique | tracé d'après les analyses chimiques. | [ornate rule] | Nouveau édition corrigée et augmentée par la Nomenclature relative | aux mêmes objects de Mr. Haüy. | [ornate rule] | Par | le Prince Dimitri de Gallitzin | [...6 lines of titles and memberships...] | [rule] | [...2 lines of quotation, signed Haüy...] | [tapered rule] | Brunsvik | de l'Imprimerie de la maison des Orphelins, | 1802.

2°: π² A-B² 1-792; 164ℓ.; [4], I-VIII, 1-316 p. PAGE SIZE: 290 x 185 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication to Mr Brückmann.; [1 pg], Blank.; I-VII, Introduction.; VIII, "Errata."; 1-296, Text.; 297-313, "Tableau Lithologique."; 314-316, "Conclusion."

VERY SCARCE. An alphabetical classification of minerals, metals, earths, stones with their different descriptions, accompanied by extensive descriptions and references to the literature on the subject. The appearance of HAÜY's *Traité de Minéralogie* (1st ed., Paris, 1801), in which he revised the nomenclature of mineralogy, caused Golitsyn to publish this corrected and enlarged second edition. The introduction discusses the principles of RENÉ JUST HAÜY's mineralogical nomenclature. The text then presents an alphabetical list of mineralogical terms that provides alternate names from other authors and a short descriptive commentary of the subject. Histories of some mineral species are also provided. At the conclusion of the alphabetical list is a table of lithology that compares the relative composition of earths, silica, alumina, calce, magnesium, baryte, strontian and zirkonium. A key at the



RECUEIL DE NOMS, 1802

end provides some early chemical formulas of rocks and a few pages of conclusions.

REFERENCES: LKG: VIII 12. • Roller & Goodman, *Catalogue*, 1976: 1, 470.

1949. — French, 1801.

Description | Abrégée Et Méthodique | Des Minéraux. | Par le Prince D. de Gallitzin, | [...3 lines of titles and memberships...] | [tapered rule] | A Paris, | Chez Ant. Aug. Renourad, Libraire, rue | S.-André-des-Arcs, n°. 42. | An IX—1801.

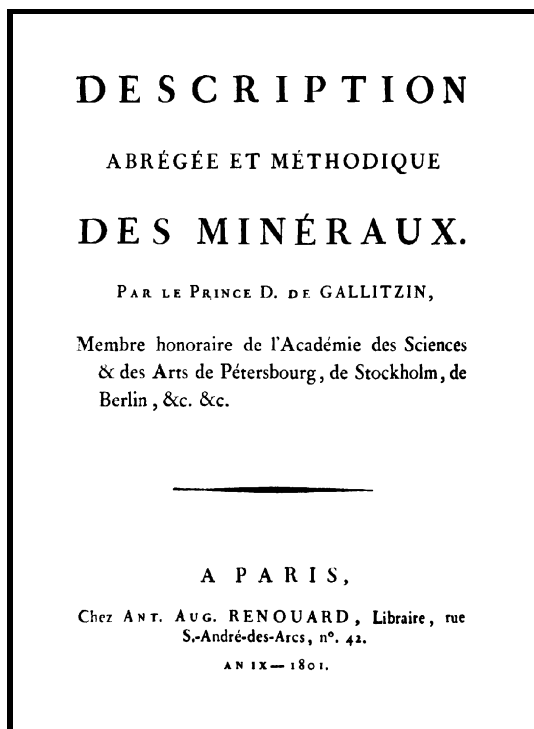
4°: π^2 A²-A⁴ B-Ff⁴ Gg-Ii²; 125ℓ.; [4], [iii]-vi, [7]-245, [3] p. Pages i-ii absent, perhaps cancelled. PAGE SIZE: 225 x 180 mm.

VERY SCARCE. A general mineralogy, largely descriptive, describing and implementing the author's system of classification. In the introduction, Golitsyn explains that he classifies minerals into 8 orders or "genres": (1) quartzueux, (2) métaux et demi-métaux natifs, (3) matières calcaires, (4) produits végétaux & des animaux, (5) acides & les sels, (6) matières mixtes, (7) métaux et demi-métaux minéralisés and (8) ouvrages & les produits des feux souterrains.

REFERENCES: Sinkankas, *Gemology Bibliography*, 1993: no. 2295.

1950. — French, 1797.

Lettre a monsieur le conseiller et professeur de Crell ou Observations sur la Catalogue Methodique et Raisonné de la Collection de Fossiles de M. E.



DESCRIPTION, 1801

de Raab, par M. de Born ... par la Prince D. de Gallitzin. Brunsvica, 1797.

4°: 62 p. VERY SCARCE.

REFERENCES: LKG: XIII 284 7 XV 26b.

1951. — French, 1799.

Seconde lettre à Monsieur de Crell, ou Réflexions sur la Minéralogie Moderne, par le Prince D. de Gallitzin. Brunswick, 1799.

4°: 51 p. VERY SCARCE.

REFERENCES: LKG: XV 27c.

GONNARD, Ferdinand. *Engineer of arts & manufactures.*

Corresponding member of the academy of Clermont-Ferrand. Member of the Société Géologique de France. Member of the association for the advancement of science in France.

1952. — French, 1870 [First edition].

Minéralogie | Du | Département Du Puy-De-Dome | Par | F. Gonnard | [...2 lines of titles and memberships...] | [rule] | [Two columns separated by vertical bar:] Paris | F. Savy, Éditeur | Sur Hautefeuille, 24 | [vertical bar] | Lyon | Chez L'Auteur | Sur Saint-Pierr, 27 | [centered at the bottom of the two columns:] 1870.

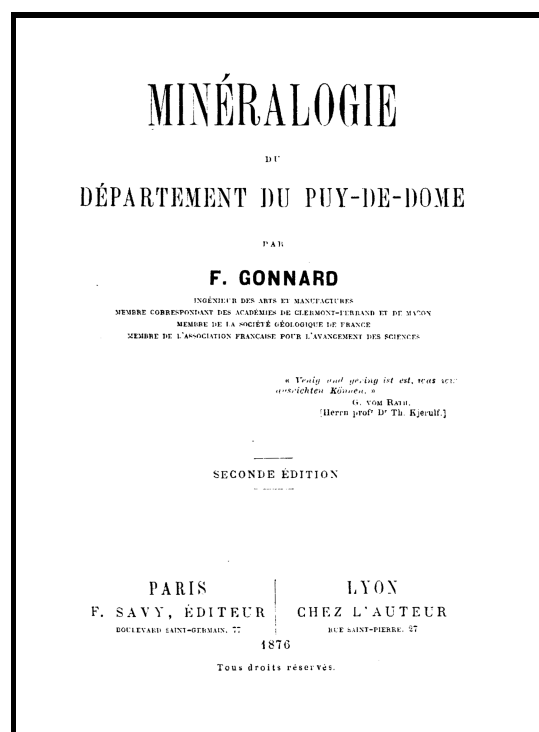
8°: [2], [i]-vii, [1], [1]-80 p.

CONTENTS: [2 pgs], Half title page, "Minéralogie | Du | Département Du Puy-De-Dome," verso "Lyon ..."; [i-ii], Title page, verso blank.; [iii], Dedication to M. P. Piaton.; [iv], Blank.; [v]-vii, "Introduction."—dated 25

January 1870.; [1 pg], Blank.; [1]-75, Text.; [76]-80, "Table
| Par Ordre Alphabétique | ..."

RARE. Describes the minerals found in the Puy-
De-Dome area of France. The text fully describes those
mineral species found in the area.

REFERENCES: BL: [7104.de.26.]. • NUC.



MINÉRALOGIE, 1876

1953. 2nd edition, 1876: Minéralogie | du | Département du
Puy-De-Dôme | Par | F. Gonnard | [...4 lines of titles
and memberships...] | [...4 lines of quotation from G. vom
Rath...] | [rule] | Seconde Édition | [rule] | [In 2 columns
separated by a verticle rule:] Paris | F. Savy, Éditeur |
Boulevard Saint-Germain, 77 | [vertical rule] | Lyon |
Chez L'Auteur | Rue Saint-Pierre, 27 | 1876 | Tous Droits
Réservés.

18°: π^4 1¹² 2⁶ 3¹² 4⁶ 5¹² 6⁶ 7¹² 8⁶ 9¹² 10⁶ χ^6 ; 100 ℓ .;
[i]-viii, [1]-192 p., index. PAGE SIZE: 186 x 120 mm.

CONTENTS: [i-ii], Half title page, "Minéralogie |
du | Département du Puy-De-Dôme," verso "Ouvrages
du même auteur."; [iii-iv], Title page, verso blank.;
[v], Dedication to M. Damour.; [vi], Blank.; [vii]-viii,
"Introduction."—dated 15 June 1876.; [1]-172, Text.; [173]-
179, "Tableau | des | Espèces Minérales | du | Département
du Puy-De-Dôme."; [180], Blank.; [181]-185, "Liste | des |
Concessions de Mines | faites | dans le Département du Puy-
De-Dôme."; [186], Blank.; [187]-192, "Table Alphabétique
| des Minéraux cites dans cet ouvrage."

VERY SCARCE. This greatly expanded edition fully
describes the mineral species found in the region of Puy-
De-Dome in France.

REFERENCES: BL: [7106.aaa.17.]. • NUC.

1954. — French, 1906.

Annales De L'Université De Lyon | Nouvelle Série
| I. Sciences, Médecine. — Fascicule 19. | [rule] |

Minéralogie | Des Départements | Du Rhône Et
De La Loire | Par | Ferdinand Gonnard | Ingénieur
des Arts et Manufactures. | [rule] | Avec 31 figures
intercalées dans le texte | [ornament] | [Next text set
up in two columns, separated by a vertical rule: Lyon
| A. Rey, Imprimeur-Éditeur | Rue Gentil, 4. |
[Vertical rule] | Paris | Librairie J.-B. Baillière et
Fils | 19. Rue Hautefeuille. | 1906.

8°: [4], [1]-122 p., illus., diagrams. Published as:
Annales de l'Université de Lyon, Nouv. sér. 1. Sciences,
médecine, fasc. 19.

CONTENTS: [2 pgs], Half title page, "Minéralogie |
Des Départements | Du Rhone Et De La Loire," verso
"Lyon — A. Rey ..."; [2 pgs], Title page, verso blank.; [1]-
3, "Préface."; [4], Blank.; [5]-120, Text.; [121]-122, "Table
Des Nomes D'Espèces Minérales Et De Variétés | Citées
Dans Cet Ouvrage."

VERY SCARCE. Published in: Lyons.-Université de
Lyon. Annales. Nouvelle série. I. Sciences, Médecine.
fasc. 19. 1899, etc.

REFERENCES: BL: [Ac.365.(a.)].

GONNELLI, Giuseppe.

1955. — Latin, 1702.

Thesaurus | Philosophicus, | Sev | De Gemmis |
Et Lapidibus Pretiosis | Doctoris Physici | Josephi
| Gonnelli | [ornament] | Neapoli. M.DCCII. | Apud
Joannem Baptistam Komarek. | [rule] | Superiorum
Permissu.

12°: a¹² A-K¹² L¹¹; 143 ℓ .; [24], 258, [4] p.
Woodcut headpiece, ornamental initials, chapter
ornaments. PAGE SIZE: 136 x 74 mm.

RARE. Basically this is a treatise on gems and
other precious stones, compiled from many ancient
and contemporary sources, with little or no originality
on Gonnelli's part. The first portion of the text is
divided into three parts describing: (1) the nature of
the lapidifying juice, (2) how gemstones derive their
color, and (3) the rôle of water in mineral formation.
Afterwards is an alphabetical glossary containing
descriptions of many gemstones. A somewhat lengthy
bibliography of cited authorities occurs on pages 225 to
234. Appended at the end are the regulations of the
library of the convent of the Blessed Mary de Monte
Carmelo at Venafro.

REFERENCES: BL: [970.a.45.]. • LKG: XVI 221. •
NUC: 205, 554 [NG 0310381]. • Roller & Goodman,
Catalogue, 1976: 1, 470. • Sinkankas, *Gemology Bibliography*,
1993: no. 2436.

GORDON, Mrs.

See: **Buckland, William, Reverend.**

GOSCHWITZ, Georgius Daniel.

1956. — Latin, 1724 [Dissertation].

Dissertatio inauguralis de Lapidibus Judaicis,
quam ... sub umbra G. D. Coschwitzi, ...
publicæ ventilationi submittet P.C. Wagner. Halæ
Magdeburgicæ, 1724.

GÖTTLING

4°: [6], 48, [4] p., one plate. RARE.

REFERENCES: BL: [B.391.(10.)]. • Dryander, *Catalogus Banks*, 1796-1800: p. 343. • LKG: XVII 132.

GÖSSEL, Johann Heinrich Gottlieb. (BORN: Friedrichswalde near Pirna, Germany, 15 June 1780; DIED: Dresden, Germany, 13 October 1846) *German mineralogist.*

Gössel was the inspector of the royal natural history and mineral cabinets in Dresden.

REFERENCES: DBA: I 403, 82; 403, 88. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • *Neuer Nekrolog der Deutschen*. • Poggendorff: 1, cols. 922 & 1569. • WBI.

1957. — German, 1824-6.

Katechismus der Mineralogie für Anfänger und Liebhaber diese Wissenschaft. Leipzig, Baumgärtner, 1824-6.

2 vols. [VOL 1] 8°: xii, 148, [1] p., 8 folding lithographic plates. [VOL 2] 8°: viii, 470 p.

RARE. Published anonymously, this work is attributed to Gössel by Poggendorff. It is an introduction to mineralogy, containing in the first volume, a scientific discussion of external characteristics, texture, hardness, density, electrical and magnetic properties, and the chemical and crystal structure of minerals, and in the second volume an outline of the mineralogical system.

Theil 1 : Allgemeine Oryktognosie. Theil 2 : Besondere Oryktognosie.

REFERENCES: BL: [no copy listed].

1958. — German, 1828-9 [First edition].

Versuch eines Grundrisses der Mineralogie von Johann Heinrich Gössel. Mit einer Vorrede von August Breithaupt. Dresden, Hilscher, 1828-9.

8°: xl, [2], 679, [4] p.

VERY SCARCE. Published as part of a series: Allgemeine Taschenbibliothek der Naturwissenschaften.

REFERENCES: SinkCard.

1959. — German, 1843 [2nd edition].

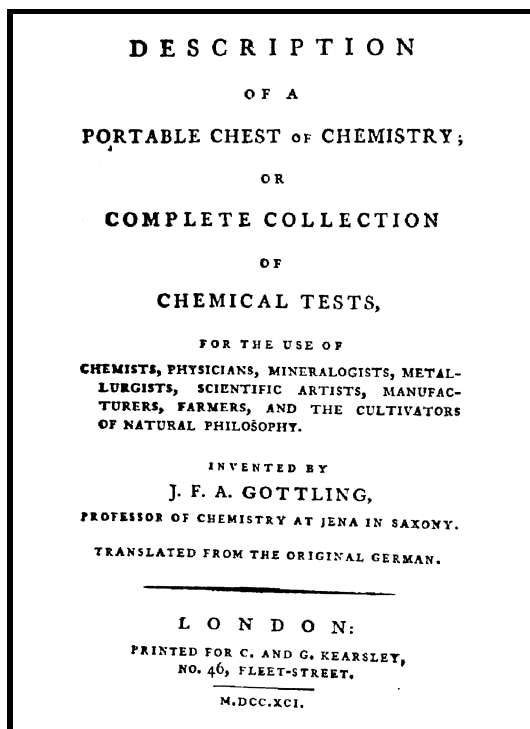
Grundriss der Mineralogie. Enthaltend: die Klassifikation, Terminologie ... Erstes Bändchen [-Fünftes Band] Prapadeutik. Neue Ausgabe. Quedlinburg und Leipzig, Ernst'sche Buchhandlung, 1843.

5 parts. [Part 1] 8°: xiii, 137 p. [Part 2] 8°: xii, 129 p. [Part 3] 8°: vi, 132-245 p. [Part 4] 8°: x, 248-402 p. [Part 5] 8°: viii, 404-542 p. Introductory pages for each section. VERY SCARCE.

REFERENCES: SinkCard.

GÖTTLING, Johann Friedrich August.

REFERENCES: DBA: I 404, 29-35; II 460, 164-166. • Günther, *Lebensskizzen der Professoren*, 1858. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • NDB: 6, 580-1 [by R. Möller]. • Poggendorff: 1, cols. 923-4. • Schaedler, *Biographisch Handwörterbuch*, 1891: 44. • WBI.



DESCRIPTION OF A PORTABLE CHEST, 1791

1960. — German, 1790.

Voll-ständiges chemisches Probiercabinet zum Handgebrauche für Scheidekünstler, Aerzte, Mineralogen, Metallurgen, Technologen, Fabrikanten, Oekonomen und Naturliebhaber, entworfen von J.F.A. Göttling ... Erster Theil, Untersuchungen auf dem nassen Wege. Jena: J.M. Mauke, 1790.

8°: 215 p.

RARE. The work describes a portable laboratory designed by Göttling. It was intended for use not only by analytical chemists, natural philosophers, mineralogists, and metallurgists, but also by doctors, technologists, and manufactures. The equipment consisted of thirty-five chemicals, together with small scales and weights, a blow-pipe, and some glass apparatus, housed in two boxes approximately 12 x 9 x 9 inches.

Göttling includes in this work descriptions of over a hundred and fifty reactions that can be preformed with the materials provided. These were all reactions in solution; the author planned to write a second book describing reactions in the dry way, but this was apparently not achieved.

REFERENCES: *Freilich Sale Catalog*: no. 215. • LKG: XI 16. • Partington, *History of Chemistry*, 1961-70: 3, 595-6. • Smeaton, *Portable Chemical Laboratories*, 1966.

1961. — German, 1802.

Praktische Anleitung zur prüfenden und zerlegenden Chemie. Jena, Bey J.M. Mauke, 1802.

8°: viii, 444 p.

RARE. Second edition[?] of *Voll-Ständiges chemisches Probiercabinet*, or perhaps the wet methods volume[?]

REFERENCES: LKG: XI 17a.

1962. — English, 1791 [English transl.].

Description | Of A | Portable Chest of Chemistry;
| Or | Complete Collection | Of | Chemical
Tests, | For The Use Of | Chemists, Physicians,
Mineralogists, Metal- | lurgists, Scientific Artists,
Manufac- | tures, Farmers And The Cultivators
| Of Natural Philosophy. | Invented By | J.F.A.
Gottling, | Professor Of Chemistry At Jena In
Saxony. | Translated From The Original German.
| [tapered rule] | London: | Printed For C. and
G. Kearsley, | No. 46, Fleet-Street. | [rule] |
M.DCC.XCI.

8°: π^4 B-N⁸; 100 ℓ .; [i]-viii, [1]-191, [1] p. PAGE
SIZE: 176 x 110 mm.

CONTENTS: [i-ii], Half title page, "Description | Of A
| Portable Chest of Chemistry," verso blank.; [iii-iv], Title
page, verso blank.; [v]-vii, "Preface.;" [1], Errata.; [1]-191,
Text.; [1 pg], Blank.

VERY SCARCE. Translated from *Voll-Ständiges
Chemisches Probiercabinet* (Jena, 1790). The preface
tells of Göttling's prominence as a chemist of the highest
order, and that the portable chest described within
this work may be purchased from C. and G. Kearsley's,
No. 46, Fleet-Street, London, who are most probably
responsible for this translation being undertaken.

REFERENCES: Cole, *Chemical Literature*, 1988: no. 538.
• Smeaton, *Portable Chemical Laboratories*, 1966.

GOTTWALD (Gottwaldt), Christoph. (BORN: 1636;
DIED: 1680) *German physician.*

Gottwald had a medical practice in Danzig.

REFERENCES: Krollmann, C.A.C., ed., *Altpreu-
sche Biographie*. Herausgegeben im Auftrage der His-
torischen Kommission für Ost- und Westpreussische Lan-
desforschung. Königsberg, Gräfe und Unzer, 1936-44. Vols
1-2, fasc. 3. [Biographical dictionary of deceased Prus-
sians.]. • *Catalogue of Portraits of Naturalists*: 495 [1 por-
trait listed]. • DBA: I 411, 178-180; II 468, 123-124. •
Jöcher, *Gelehrten-Lexikon*, 1750-51: ??, ??. • Nagler, *Neues
allgemeines Künstler-Lexikon*, 1835-52. • Thieme & Becker,
Allgemeines Lexikon, 1907-50. • WBI.

1963. — Latin, 1714 [Sale catalog].

Musæum Gottwaldianum, | Sive | Catalogus
| Rerum Variorum, Tam | Naturalium, Quam
Artificia- | lium, Longa Annorum Serie. Auraque et
Sumtibus Haud | Exiguus Collectarum, | à | Viris
d.v. | Excellentissimis Expe- | rientissimisque,
| D. Christophoro | Gottwaldio, | Med. D. &
Physico Gedanensi, Parre & | D. Joh. Christoph.
| Gottwaldio, | Med. D. Filio, | Quas Publica
Auctione | In Ædibus Gottwaldianis | Anno 1714.
d. | Divendet | Georgius Mattern. | [rule] | Tis
Joh. Zachariæ Stollii.

8°: π^1 A-??

CONTENTS: [2 pgs], Title page, verso blank.; Folios
A1r-???, Text.

VERY RARE. Apparently, this is an auction
sale catalog listing the contents of Gottwald's cabinet.
The collection consisted principally of natural history
objects, but also held a considerable number of artificial
objects, antiquities and works of art. The collection *en
bloc* was purchased by Peter the Great and transported
to St. Petersburg for incorporation into the Royal
Museum.

REFERENCES: BL: [B.677.(2.)]. • Murray, *Museums*,
1904: 1, 147 & 2, 263.

1964. — Latin, 1714 [Collection catalog].

Musæum Gottwaldianum sive Catalogus rerum
rariorum ... collectarum a C.G. patri et J.C.G. filio
... Danzig, 1714.

4°: 113 plates, frontispiece portrait. Title page
and index in manuscript—BMC.

VERY RARE. After the sale of the natural history
collections, Gottwald's son, Johann Christoph [1670-
1713], arranged for the publication in two parts of a
limited edition of the plates prepared years before by his
father to illustrate a never published *catalogue raisonné*.
At the end of the 18th century, the portion of the plates
concerning shells were again reissued with a text by
Johann Schröter under the title, *Mvsei Gottwaldiani
Testaceorum* (Nürnberg, 1782) [which see].

REFERENCES: BMC. • Cobres, *Deliciæ Cobresianæ*,
1782: 2, 805. • Murray, *Museums*, 1904: 1, 147 & 2, 263.

GOUFFIER, M. le Marquis de.

1965. — French, 1780 [Collection catalog].

Description du cabinet d'histoire naturelle ci-
devant appartenant a M. Le Marquis de ***,
dont la vente se fera par M. Leblanc, huissier-
commissaire-priseur, le Lundi 20 Novembre 1780,
à quatre heures de relevée, rue St. Honoré à l'Hôtel
d'Aligre. ... A Paris, Et se Distribue Chez M.
Leblanc ..., 1780 ([Paris], D'Houry).

8°: π^2 A-V⁴ X²; 84 ℓ .; iv, 164 p. Name of printer
from colophon (p. 164), which reads: De l'imprimerie
de D'Houry ...

RARE. Catalog prepared by M. Leblanc. Owner
of collection identified as M. le Marquis de Gouffier on
p. 1 (2nd group). Contains a substantial mineralogical
portion.

REFERENCES: NUC.

GOUSSIER, Louis-Jacques. (BORN: Paris, France,
7 March 1722; DIED: Paris, France, 23 October 1799)
French mathematician.

Goussier was a professor of mathematics in Paris.
He supervised the technical plates of the *Encyclopédie* by
Diderot and d'Alembert.

REFERENCES: ABF: I 470, 446-447. • *Biographie
Universelle*. • DBF: ??, ??. • Le Moyne, Nicolas Toussaint.,
Les siècles littéraires de la France. Paris, 1800-3. 4 vols.
[Reprinted, Genève, Slatkine, 1971.]. • *Nouvelle Biographie
Générale* (Hofer). • Poggendorff: I, col. 933. • Thieme &
Becker, *Allgemeines Lexikon*, 1907-50: ??. • WBI.

GRAILICH

Physique du Monde. (Paris, 1780-87).

See: Marivetz, Étienne Claude De, Baron.

GRAEFENHAHN, Wolfgang Ludwig. (BORN: 1718; DIED: 1767) *German lawyer.*

REFERENCES: DBA: I 413, 2-18. • Dörfler, Johann Friedrich., *Symbolvm pietatis vrnae viri dvm viveret illvstris et amplissimi Wolfgang Lvdovici Graefenhahnii.* Baruthi, Langbein, 1767. 4 p. • Fikenscher, G.W.A., *Gelehrtes Fürstenthum Baireut..* • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 934. • WBI.

1966. — Latin, 1764.

Actvm Oratorivm in ivbilaeo Secvleri Illvstris Collegii Christian-Ernestini ... indicit De Oryctographia Bvrggraviatvs Norici Svperioris Praefatvs Wolfgang Lvdovicvs Graefenhahn. Baruthin, Langbein, 1764.

4°: 2ℓ.; [4] p.

VERY RARE. An early topographical mineralogy describing the mineralogy around Nuremberg, Germany.

German transl., 1766: "Entwurf einer oryktographie des Burggraffthums Nürnberg. Aus dem Lateinischen des Herrn Gräffenhahn," *Bayreuther Historischer Nachrichten*, 1766, p. 91-100.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, p. 139. • LKG: XIV 101.

GRAFFENAUER, Jean Philippe. (BORN: 1775; DIED: 1838) *French physician & mineralogist.*

REFERENCES: ABF: I 472, 128-129. • DBA: I 414, 247. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Sitzmann, E., *Dictionnaire de biographie des hommes célèbres de l'Alsace depuis les temps les plus reculés*. Rixheim, 1909-10. 2 vols. • WBI.

1967. — French, 1806.

Essai | D'Une Minéralogie | Économico-Technique | Des | Départements Du Haut- Et Bas-Rhin | Formant | La Ci-Devant Alsace | On | Distribution méthodique de toutes les substances minérales et | fossiles qui se trouvent dans ce pays; avec indication de leurs | principaux caractères, de leurs gissemens et localités, des tra- | vaux des mines et du produit de leur exploitationm, des ateliers, | manufactures et fabriques y relatives, ainsi que des applications | et des usages de ces mêmes substances dans les arts, l'agriculture, | l'économie domestique, la médecine, l'art vétérinaire etc. etc. | Par Jean-Philippe Graffenauer, | [...5 lines of titles and memberships...] | [rule] | Avec une Carte minéralogie de l'Alsace. | [rule] | Strasbourg, | Chez Louis Eck, Imprimeur-Libraire. | [wavy rule] | 1806.

8°: π⁶ 1-23⁸ 246; 195ℓ.; [6], [i]-xiv, [1]-354, [16] p., one large folding map.

CONTENTS: [2 pgs], Half title page, "Minéralogie | Alsacienne | Économico-Technique," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], "A Mousieru | Shee | ..."; [i]-[v], "Liste de MM. les Abonnés, par ordre |

alphabétique."; [vi], Blank.; [vii]-xiv, "Avant-Propos."; [1]-354, Text.; [15 pgs], "Tableau."; [1 pg], "Fautes à corriger." [=errata].; [At end], Large folding map.

VERY SCARCE. A systematic study of the mineral riches of Alsace, including details of the geology, the various minerals and their localities, the mines and quarries or pits, and the industries dependent on the minerals. There are also sections on the volcanic rocks, meteorites and fossils found in the area. The large map finely illustrates the mineralogy of the region described.

REFERENCES: LKG: XIV 366.

1968. — French, 1821.

Histoire | Naturelle, Chimique Et Technique, | Du Succin | Ou Ambre Jaune; | Par | J.P. Graffenauer, | [...5 lines of titles and memberships...] | [ornament] | Paris, | Chez F.G. Levrault, rue des Fossés M. le Prince, N.° 33. | [rule] | Strasbourg, de l'Imprimerie de F.G. Levrault. | 1821.

8°: [1]-104 p. PAGE SIZE: 217 x 137 mm.

VERY SCARCE. Describes various aspects on amber. It is the only substantial monograph written in French about the substance. The first portion describes the history of the substance, while the second part is a thorough treatment of the physical & chemical properties. Sinkankas considers it a rare book.

REFERENCES: Roller & Goodman, *Catalogue*, 1976: 1, ??; Sinkankas, *Gemology Bibliography*, 1993: no. 2482.

GRAILICH, Wilhelm Joseph. (BORN: Bratislava, Slovakia, 16 February 1829; DIED: Vienna, Austria, 13 September 1859) *Austrian crystallographer & experimental physicist.*

Grailich was a Privatdocent at the University of Vienna, as well as an assistant at the royal polytechnique institute. Wrote primarily on crystallographic subjects. Founder of the "Austrian school" of crystallography.

REFERENCES: ADB. • *Almanach der Akademie der Wissenschaften in Wien*. • DBA: I 414, 360-367; II 472, 130-134. • Fuchs, A., Dr. J. Grailich. *Eine biographische Skizze*. Pressburg, 1860: 1860. • NDB: 6, 735-6 [by M. Kirchmayer]. • *Österreich Biographisches Lexikon*: 2, 46-47. • Poggendorff: 1, cols. 937-938 & 3, 541. • Sundström, C.J., *Framställning af hufvudpunkterna I Andreæ Cæsalpini filosofi. Akadernisk Afhandling*. Upsala, 1860. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91. • *Zeitschrift für die Österreichischen Gymnasien*, Wien: 1859, 755-60.

Lehrbuch der Krystallographie von Professor W.H. Miller. Uebersetzt und erweitert durch Dr. J. Grailich ... Mit einem Hefte von XIX Kupfertafeln. (Wien, 1856).

See: Miller, William Hallows.

1969. — German, 1858.

Krystallographisch-Optische | Untersuchungen. | [ornate rule] | Von | Prof. Dr. Jos. Grailich, | Custosadjuncten Am K. Hof-Mineralienkabinet. | Eine Von Der Kaiserl. Akademie Der Wissenschaften Am 30. Mai 1857 | Gekrönte Preisschrift. | [ornate rule] | Wien & Olmüz. | Eduard Hölzel's Verlags-Expedition. | 1858.

8°: [4], viii, 236 p., 127 illus.

VERY SCARCE. This prize winning essay is a work of high merit and value. It treats the optical

characters of numerous artificial crystals and native minerals, and the modes of optical investigations. The prize was awarded by Academy's judging committee consisting of Heinrich Eduard Schröter (1829–1892), Wilhelm Haidinger [q.v.], and Franz Xaiver Zippe [q.v.] on December 31, 1856, with the device: "Nur die allseitige Erforschung der Krystalle kann die Grundlagen einer künftigen Moleculartheorie schaffen." [ADD TRANSLATION HERE!].

REFERENCES: *American Journal of Science*: 2nd Series, 26 (1858), 345. • NUC: 209, 578-9 [NG 0375801].

GRAMBS, Johann Jacob. *German physician & anatomist.*

Grambs received his medical degree from the University of Altdorf about 1716.

REFERENCES: Hirsch, *Biographisches Lexikon*, 1884-8: ??.

1970. — Latin, 1741 [Collection catalog].

Designatio Naturalium quae in Musaeo Domini D. J. J. Grambsii Reipubl. Francof. Physici Ordinarii Secundum Tria Regna Distributa Asservantur inque Simul Methodi Conspectus, quomodo Secundum Naturae Ductum pro Facilitanda Memoria sint Collocata ... Francofurti ad Moenum, 1741.

8°: 8l.; [16] p.

VERY RARE. Grambs' outline of how objects of the three realms of nature should be classified within a museum. It also includes brief descriptions of specimens from his own collection, which included minerals.

Dissertation, 1716: *Dissertatio medica De nephritide sive calculo renum.* Johann Jacob Jantke, exponet. [Resp.:] Johannes Jacobus Grambs. Altdorf, M.D. Meyer, 1716. 40 p. [Grambs' dissertation.]

REFERENCES: BL: [no copy listed]. • Boehmer, *Bibliotheca Historiae Naturalis*, 1785-9: 1, 393. • Murray, *Museums*, 1904: 2, 30. • Wilson, *History of Mineral Collecting*, 1994: 173 & 212.

GRANGER, Guillaume. (BORN: ?; DIED: 1648) *French physician.*

REFERENCES: ABF: I 474, 319. • WBI.

1971. — French, 1640.

Paradoxe, | Qve Les Metavx | Ont Vie. | Composé par Guillaume Granger, | Duennois Medecine du Roy, | & de Monsieur. | [vignette] | A Paris, Chez Michel Soly, rue S. Iacques, | u Phœnix. | [rule] | M. DC. XL. | Auec Privilege du Roy.

8°: [8], [1]-96 p., one engraved title vignette, 2 woodcut head-pieces (repeated) and one woodcut initial.

RARE. This curious work contains interesting chapters, such as: De l'amour de Dieu et la creation du Monde/ De la nutrition & croissance des metaux/ Des raisons particulieres aux Pierrieres qui confirment leur vie/etc., etc.

Apparently rare enough in the first edition that Gobet could not include its text in his *Les anciens minéralogistes du royaume de France* (Paris, 1779) that reprinted many early French works on mining, metallurgy and mineralogy.

Reprinted, 1751: *Paradoxe, que les métaux ont vie.* See: A.A. Barba, *Métallurgie* (1751), volume 2.

REFERENCES: BL: [B.257.(2.)]. • Brunet: 2, 1704 ["Livres vend. 20 fr. Leber, en 1860, à cause de sa singularité"]. • Duveen, *Bibliotheca, Supplement*, 1953: p. 265. • LKG: XVI 41. • NUC: [no copy listed]. • Wellcome Catalog (Books): 1, no. 2903.

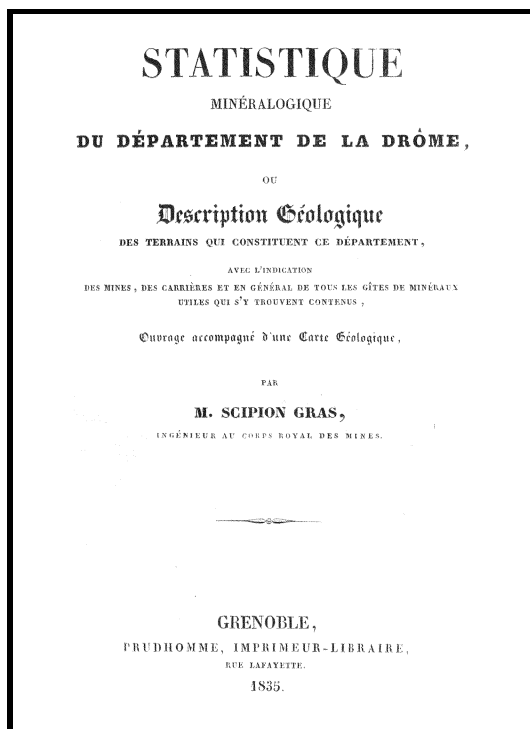
GRANT HERBIER.

See: Arbolayre (or Grant Herbiere).

GRAS, Joseph Scipion. (BORN: Grenoble, France, 10 January 1806; DIED: Grenoble, France(?), 1873) *French mine engineer.*

Gras graduated from the École des Mines in Paris in 1824. It is known from his geological work that he worked as a mining engineer. He specialized in the minerals, mines and geology of parts of the French Alps, authoring several works. At one time he proposed a system of defense against the destruction caused by the deforestation of the Alps, and took measurements to support his view. He concluded his career as the chief of mines in Grenoble.

REFERENCES: ABF: I 475, 65-67. • Internet search. • WBI.



STATISTIQUE MINÉRALOGIQUE, 1835

1972. — French, 1835.

Statistique | Minéralogique | Du Département De La Drôme, | Ou | Description Géologique | Des Terrains Qui Constituent Ce Département, | Avec L'Indication | Des Mines, Des Carrières Et En Général De Tous Les Gîtes De Minéraux | Utiles Qui S'y Trouvent Contenus, | Ouvrage accompagné

GRATACAP

d'une Carte Géologique, | Par | M. Scipion Gras, |
Ingénieur Au Corps Royal Des Mines. | [ornate rule]
| Grenoble, | Prudhomme, Imprimeur-Libraire, |
Rue Lafayette. | 1835.

8°: [i]-xii, [1]-292, [4] p., one folded hand-colored geological map. PAGE SIZE: 230 x 140 mm.

CONTENTS: [i-ii], Half title page, "Statistique | Minéralogique | Du Département De La Drome;" verso blank.; [iii-iv], Title page, verso blank.; [v]-vi, "Avertissement."—dated 10 April 1835.; [vii]-xii, "Table | Des Matières.;" [1]-282, Text.; [283]-292, "Table Alphabétique Des Principaux Lieux Cités Ou Décrits.;" [1 pg], "Errata.;" [1 pg], Blank.; [1 pg], "Avertissement | Sur La Carte Géologique.;" [1 pg], Blank.

VERY SCARCE. An early topographical study of the minerals in the region of Drôme, located in the French Alps. It gives locations of mines, information of production and a list of mineral species found. A hand-colored geological map provides a visual overview of the area.

REFERENCES: NUC. • *USGS Library Catalog*.

1973. — French, 1840.

Statistique minéralogique du département des Basses-Alpes, ou, Description géologique des terrains qui constituent ce département avec l'indication des gîtes de minéraux utiles qui sy trouvent contenus ouvrage accompagné d'une carte et de coupes géologiques par Scipion Gras. Grenoble, Prudhomme, 1840.

8°: x, 224 p., one folded hand-colored geological map, folded hand-colored geological cross sections.

VERY SCARCE. An early topographical study of the minerals in the region of Basses, located in the French Alps. A hand-colored geological map provides a visual overview of the area.

REFERENCES: *USGS Library Catalog*.

1974. — French, 1862.

Description géologique du département de Vaucluse, suivie d'une notice sur ses mines et ses carrières. Paris, F. Savy, 1862.

8°: xiv, 438 p., illus.

RARE. Topographical study of the geology and minerals in the region of Vaucluse in the French Alps, together with notices of mines in the area.

REFERENCES: *USGS Library Catalog*.

GRATACAP, Louis Pope. (BORN: Brooklyn, New York, U.S.A., 1 November 1851; DIED: 1917) *American mineralogist & naturalist*.

Gratacap was graduated at the College of the City of New York in 1869 and at the Columbia school of mines in 1876. Subsequently he received the appointment of assistant curator in paleontology and mineralogy in the American museum of natural history in New York, where the arrangement of the specimens in the present building was largely conducted under his supervision. Mr. Gratacap has also held the office of chemist to the Metropolitan gaslight company in New York for many years. He has been a large contributor to scientific journals, and, besides botanical notes in the "Bulletin of the Torrey Botanical Club," has published a series of papers on "The Ice Age"



GRATACAP

in the Popular Science Monthly for 1878, a series on "Gas and Gas-Making" in the "Scientific American Supplement" (1880), and a valuable series on archaeology in the "American Antiquarian" (1883-'4). Mr. Gratacap is also the author of "Philosophy of Ritualism, or Apologia pro Ritu" (New York, 1887).

REFERENCES: ABA: I 642, 20-24. • Adams, *Dictionary of American Authors*, 1904. • Anon., "Louis Pope Gratacap," *The Nautilus*, 31 (1918), no. 4, 135-6, portrait. • *Appleton Cyclopaedia of American Biography*. • *Herringshaw's National Library of American Biography*. • Lambrecht & Quenstedt, *Catalogus*, 1938: 170. • Sarjeant, *Geologists*, 1980: 2, 1134. • WBI. • Weingartner, M.P., "Some malacologists of the New York area," *The Nautilus*, 69 (1955), no. 2, 48-53. • *Who Was Who in America*: 1, ??.

1975. — English, 1903.

Vade Mecum Guide. | A Popular Guide | To | Mineral Collections. | With A Chapter On | The Development of Mineralogy. | By | L.P. Gratacap, A.M., | American Museum Of Natural History. | Published By | The Broadway Press, | 1989 Broadway, New York.

[1]-178 p., frontispiece, 15 plates, illus.

CONTENTS: [1-2], Title page, verso "Errata.;" [3]-4, "Preface.;" [5]-174, Text.; [175]-178, "Index."

VERY SCARCE. Published in 1903, the *Vade Mecum Guide* is an excellent pocket book explaining mineralogy and mineral collecting. This work was written by Gratacap in close association with the ARTHUR CHAMBERLAIN, then editor of the periodical *The Mineral Collector*. This is indicated by the use in Gratacap's work of photographic illustrations that are common between issues of *The Mineral Collector* and *Vade Mecum Guide*. In addition, the same publisher produced both works.

REFERENCES: BMC: 6, 392.

1976. — English, 1912.

A Popular Guide | to Minerals | With chapters on the Bement Collection of Minerals in the American | Museum of Natural History, and The Development of Miner- | alogy; for use of visitors

A POPULAR GUIDE to MINERALS

With chapters on the Bement Collection of Minerals in the American
Museum of Natural History, and The Development of Mineral-
ogy; for use of visitors to public cabinets of minerals
and for elementary teaching in mineralogy.

BY
L. P. GRATACAP, A. M.
American Museum Natural History

WITH 400 TEXT ILLUSTRATIONS
AND 74 PHOTOGRAPHIC PLATES

CONTAINING A MAP OF THE
DISTRIBUTION OF MINERALS IN
THE UNITED STATES



NEW YORK
D. VAN NOSTRAND COMPANY
Twenty-five Park Place
1912

POPULAR GUIDE TO MINERALS, 1912

to public cabinets of minerals | and for elementary
teaching in mineralogy. | By | L.P. Gratacap, A.M.
| American Museum Natural History | With 400
Text Illustrations | And 74 Photographic Plates. |
[rule] | Containing a Map of the | Distribution Of
Minerals In | The United States | [ornament] | New
York | D. Van Nostrand Company | Twenty-five
Park Place | 1912.

8°: [4], [1]-330, [1]-30 p., 74 plates, 400 illus. PAGE
SIZE: 224 x 150 mm.

CONTENTS: [2 pgs], Title page, verso "Copyright, 1912
| By | D. Van Nostrand Company."; [2 pgs], "Preface."—
signed L.P.G. [=Louis Pope Gratacap], 15 April 1912.;
[1]-103, "Definition of Terms" [=introduction].; [104]-198,
"Guide to Collection"—which concludes with a list of
minerals found on the Island of New York.; 199-259,
"Development of Mineralogy."; 260-316, "The Bement
Collection of Minerals."; 317-319, "General Index."; 320-
330, "Mineral Index."; [1]-29, Short-Title Catalog of D.
Van Nostrand Company.; [1 pg], Advertisement.

SCARCE. An enlarged and revised edition of *Vade
Mecum of Minerals* (New York, 1903). The text is
intended chiefly for the use of visitors to public cabinets
and collections of minerals, but is so arranged that
it forms an adequate text for elementary teaching
in mineralogy as well. The book contains a section
on crystallography, followed by a discussion of the
physical and chemical properties of minerals. The
section devoted to the description of mineral species
— in harmony with the purpose of the book — has
been entitled "Guide to the Collections." An extensive

history of the development of mineralogy follows and
the book closes with a description of the fine Bement
mineral collection which belongs to the American
Museum of Natural History in New York City and of
which the author of the book is curator. There are text
illustrations, 74 photograph plates and a map showing
the distribution of minerals in the United States.

REFERENCES: *Book Review Digest*: (1913), 214 [Lists
other reviews]. • *Science*: 26 (1912), 637 [by W.E. Ford].

GRAUEL, Johann Philipp. (BORN: Strasbourg,
Alsace, France, 13 November 1711; DIED: Strasbourg,
Alsace, France, 1761) *French physician.*

Grauel studied at the University of Strasbourg,
receiving his degree in 1738. In 1741 he was appointed
professor of physics at the university.

REFERENCES: DBA: I 416, 355-356. • Jöcher,
Gelehrten-Lexikon, 1750-51: Suppl. 2 (1787), col. 1586.
• Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. •
WBI.

MUSEUM GRAUELIANUM,

SIVE COLLECTIONIS REGNI MINERALIS

PRÆCIPUE
HISTORIAM NATURALEM
ILLUSTRANTIS,

BEATO DOMINO
**JOHANN PHILIPPO
GRAUEL,**

MED. D. AC PHYSICES PROF. CAP. THOM. CANON.
MAGNA SOLERTIA COMPARATÆ.

FILIO EJUS
PIE NUPER DEFUNCTO
EGREGIE AUCTÆ
RECENSIO.

Argentorati, Typis JOH. HENR. HEITZII, Univ.
Typographi. 1772.

MUSEUM GRAUELIANUM, 1772

1977. — **Latin, 1772** [Collection catalog].

Museum | Grauelianum, | Sive | Collectionis
Regni Mineralis | Præcipue | Historiam Naturalem
| Illustrantis, | A | Beato Domino | Johanne
Philippo | Grauel, | Med. D. ac Physices Prof. Cap.
Thom. Canon. | Magna Solertia Comparatæ. | A
| Filio Ejus | Pie Nuper Defuncto | Egregie Auctæ
| Recensio. | [ornate rule] | Argentorati, Typis Joh.
Henr. Heitzii, Univ. | Typographi. 1772.

GRAVES

8°: [1]-184 p.

RARE. Descriptive catalog of Grauel's mineral collection published some years after his death. The text describes the earths, stones, including precious and semi-precious types, a few native metals, and petrifications contained in the cabinet. The classification followed in the text is derived from that first proposed by Wallerius, as are the basic descriptions of the specimens. Schröter considers these descriptions to be very exact and this work to be a valuable reference.

REFERENCES: Beckmann P.Ö.B.: 3 (1772), pt. 3, 461. • Berlinische Sammlungen: 9 (1772), 415. • BL: [B.254.(1.)]. • Erfurtischer gelehrte Zeitung: 3 (1772), 500ff. • Gatterer, Mineralogischen Literatur, 1798-9: 1, 272. • Jenaische gelehrte Zeitungen: 7 (1772), 461. • LKG: XV 23. • NUC: 210, 674 [NG 0394140]. • Schröter's Journal für die Liebhaber: 1 (1772), pt. 2, 180-4 [detailed synopsis of the classification method]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 945. • Wilson, *History of Mineral Collecting*, 1994: 173 & 212.



GRAVENHORST

GRAVENHORST, Johann Ludwig Carl. (BORN: Braunschweig, Germany, 14 November 1777; DIED: Breslau, Germany, 14 January 1857) *German entomologist & zoologist.*

Early on Gravenhorst developed an interest in insects. He attended the University of Helmstädt and the death of his father in 1799 left him a fortune that allowed him to pursue his interests. In 1810 he settled in Frankfurt an der Oder where he taught at the town's university. Later, he transferred to the University of Breslau. In 1825 he began to develop a mental disorder that progressed throughout his life.

REFERENCES: Adler, K., *Contributions to the history of herpetology*, Oxford, Ohio, Society for the study of amphibians and reptiles, 1989. 202 p., portraits. [Published as: *Contributions to herpetology*, no. 5; ISBN 0916984192].

1978. — German, 1816.

Die anorganischen Naturkörper, nach ihren Verwandtschaften und Uebergangen betrachtet und zu-

sammengestellt von J.L.C. Gravenhorst ... mit 7 Tafeln. Breslau, 1816.

8°: [2], xxii, 278, 7, [1] p., 7 plates.

VERY RARE. This work describes the author's theories on the formation of inorganic bodies including a great deal of thought about the chemical structure of minerals.

REFERENCES: BL: [1255.c.9.]. • Katalog Bergakademie Freiberg, 1879: p. 247 [VI. 332.]. • Partsch, *Katalog der Bibliothek*, 1851: no. 81. • Schulze, *Lehre von den Mineral-Pseudomorphosen*, 1891: p. 8.

GRAVES, F.P.

1979. — English, 1894 [Collection catalog].

A descriptive catalogue of mineral cabinet and general collection of minerals, ores, specimens, fossils, etc. ... belonging to F.P. Graves. [Doe Run, Missouri?, F.P. Graves?], 1894.

8°: [1]-53 p., 3 plates, 2 illus., one portrait.

VERY RARE. Mineral collection catalog of F.P. Graves cabinet, who lived in or near Doe Run, Missouri.

REFERENCES: NUC.

GREG, Robert Philips. (BORN: Manchester, England, 23 March 1826; DIED: 1906) *English merchant, economist, antiquary & mineralogist.*

Son of Robert Hyde Greg, who had purchased the mineral collection formed by THOMAS ALLAN and his son ROBERT in 1833. The father himself did nothing to add to the collection, but Robert for the period 1850 to 1859 actively enriched the cabinet through purchases and exchanges. This collection then formed the cornerstone of research for his important *Manual of Mineralogy* (London, 1858). In 1860, the Allan-Greg collection as it was known was sold en bloc to the British Museum.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 105. • BBA: I 483, 142. • Cleavelly, *World Palaeontological Collections*, 1983: 135. • *Mineralogical Magazine*: 14 (1907), 268-71, portrait. • Poggendorff: 4, 531-2. • *Science*: 24 (1906), 350. • WBI.

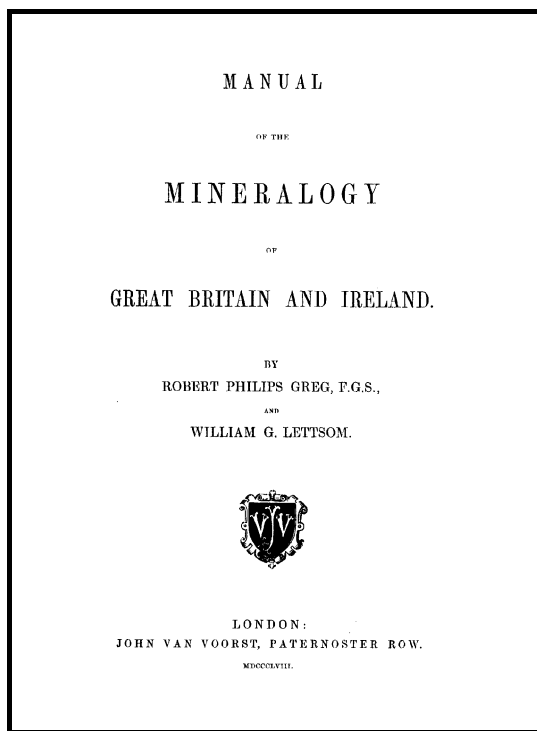
1980. — English, 1858.

Manual | Of The | Mineralogy | Of | Great Britain And Ireland. | By | Robert Philips Greg, F.G.S., | And | William G. Lettsom. | [ornament] | London: | John Van Voorst, Paternoster Row. | MDCCLVIII.

8°: π⁸ B-Z⁸ Aa-Hh⁸ Ii²; 250ℓ.; [i]-xvi, [1]-483, [1] p., illus., index. PAGE SIZE: 223 x 138 mm.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso printer notice.; [v]-ix, "Preface."; [x], Blank.; [xi]-xvi, "General Classification and Table of Orders and Species."; [1]-437, Text.; [438], Blank.; 439-448, "Supplement."; 449-450, "British Pseudomorphs."; 451-458, "List of Devon and Cornish Mines."; 459-470, "Appendix of Statistics."; [471]-474, "Addenda."; [475], "Corrigenda."; [476], Blank.; [477]-483, "Index."; [1 pg] Blank.

SCARCE. Co-authored with William Garrow Lettsom [see note below]. Great Britain for its small geographic size is especially rich in ores and other minerals, and hence a treatise on British mineralogy has an interest far beyond that of most local works. The number of species described in this volume is about 240. The authors have elaborated the subject



MANUAL OF THE MINERALOGY, 1858

with care, both as to crystalline forms, and localities, and have introduced much information of economical interest. Greg had at the time had one of the best private collections of minerals in Great Britain; besides which, the authors had access to various other cabinets. The chemical portions of the work were revised and corrected by the mineralogist MATTHEW FORSTER HEDDLE of Edinburgh. At the end is a description of British pseudomorphs and a list of the mines in Devon and Cornwall.

Facsimile reprint, 1977: Manual of the | Mineralogy | of | Great Britain & Ireland | by | Greg & Lettsom | 1858 | [rule] | A facsimile reprint | with | Supplementary Lists of British Minerals | by | L.J. Spencer, F.R.S. | and | a Fourth Supplementary List | (1977) together with a foreword | by | Peter G. Embrey | [rule] | Lapidary Publications | Broadstairs • Kent • England. 8°: [i]-xvi, [1]-483, [1] p., illus., index.

Facsimile reprint of the 1858 edition, together with an historical foreword by Peter G. Embrey [see note below] and supplementary lists of British Minerals bringing the description of British minerals upto the year 1977.

Peter Godwin Embrey. (BORN: 1929; DIED:) *English mineralogist.* Embrey was educated at Oundle School and took his degrees in chemistry and mineralogy at Oxford University. He was a demonstrator and junior lecturer at Oxford before joining the British Museum (Natural History) of which he eventually became a Principal Scientific Officer in the Department of Mineralogy. He also was curator of the national mineral collection from 1956 until his retirement in 1989. He co-authored several mineralogical works, including *Minerals of Cornwall and Devon* (London & Tucson, 1987) and *A Manual of New Mineral Names, 1892–1978* (London, 1980).

William Garrow Lettsom. (BORN: 1805; DIED: 14

December 1887) *English diplomat & amateur mineralogist.* Prior to 1858 and before going to Mexico, Lettsom sold his mineral collection to William Nevill. Eventually, this collection was incorporated into HENRY LUDLAM's accumulation, which was ultimately acquired by the Institute of Geological Sciences, London.

REFERENCES: *American Journal of Science*: 2nd Series, 26 (1858), 134. • BL. • BMC. • NUC. • Spencer, *Catalogue of Topographical Mineralogies*, 1948. (Embrey) (Lettsom) Abraham, J.J., *Lettsom [J.C.], his life, times, friends and descendants*. London, William Heinemann, 1933 [biography, pages 452-3]. • BBA: I 683, 120. • Boase, *Modern English Biography*, 1892-1921. • Cleavelly, *World Palaeontological Collections*, 1983: 184. • Embry, *Foreword*, 1977: x & xxi. • *Mineralogical Magazine*: 31, 787. • *Monthly Notices of the Royal Astronomical Society*: 48 (1888), 165-6. • WBI.

GREGOR, Josef. (BORN: Hořicích, Podkrkonoší, Czech Republic, 28 April 1873; DIED: Prag (Praha), Czech Republic, 15 March 1961) *Czech.*

REFERENCES: Czech National Library (NKC).

1981. — Czech, 1901-3.

Přírodověda Pro Žáky roin. A zinnich hospodář, škol. I, Nerostopis. Seš. I Josef Gregor, Emanuel Petera a Václav Poláček. Vrchní redakci celé knihy provedl a k tisku uprav. Adolf Eckert Chrudim. Praha, Hejda a Tuček, [1901-3].

8°: 124, 6, [2] p.

RARE. Co-authored with Emanuel Petera [see note below] and Václav Poláček..

Emanuel Petera. (BORN: Horním Dechtově, Czech Republic, 24 July 1846; DIED:) *Czech naturalist.* Petera was an author who wrote on botany, zoology, and mineralogy.

REFERENCES: Czech National Library (NKC). (Petera) Czech National Library (NKC).

1982. — Czech, 1903.

Stručný Nerostopis v Přehledu. Ku prakt. potřebě všeob. zejména pak učitelů odbor., jakož i na prospěch mládeže studující. Praha, Hejda a Tuček, 1903.

8°: 55, 6 p. RARE.

REFERENCES: Czech National Library (NKC).

GREGORII, Johann Gottfried.

1983. — German, 1715.

Die curieuse Orographia, oder, Accurate Beschreibung derer berühmtesten Berge in Europa, Asia, Africa und America, mit denen auserlesensten theologischen, politischen, physicalischen und Historien, wie auch allen darbey sich ereignenden denckwürdigen Antiquitäten ... Franckfurth, Bey H.P. Ritscheln, Buchhändler in Erffurt, 1715.

8°: 727 p., frontispiece. RARE.

REFERENCES: BL: [10005.aaa.13.]. • LKG: XIII 46.

GREIM, Georg Heinrich.

GREW

1984. — German, 1895.

Die Mineralien des Grossherzogtums Hessen. Giessen, 1895.

8°: 68 p. Topographical mineralogy describing the minerals of Hessen in Germany. VERY SCARCE.

REFERENCES: Spencer, *Catalogue of Topographical Mineralogies*, 1948: [p. 307].

GRETE HERBALL.

See: Arbolayre (or Grant Herbie).

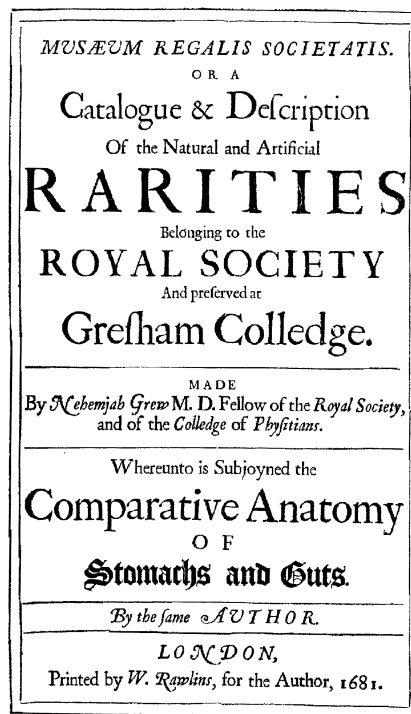


GREW

GREW, Nehemiah. (BORN: Mancetter, Warwickshire, England, 1641; DIED: London?, England, 25 March 1712) *English physician.*

Grew was the son of a clergyman and schoolmaster. After an early education at Coventry, he received his B.A. from Cambridge in 1661. He then received his M.D. from the University of Leiden, and returned to England, opening a medical practice first in Coventry then in 1672 in London. Because of Grew's interest in plant anatomy, he was elected a fellow of the Royal Society, where he came in contact with many notable scientists, including Robert Hooke. Through Hooke, Grew was introduced to techniques of microscopic examination, which he used in throughout his scientific researches. Today, Grew is principally remembered for his outstanding contributions to plant anatomy, which were collected together and published in his *The Anatomy of Plants* (London, 1682).

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • Arber, A., "Tercentenary of Nehemiah Grew (1641-1712)," *Nature*, **147** (1941), 630-2. • BBA: I 486, 159-185; I 486, 158. • Carruthers, W., "On the Life and Work of Nehemiah Grew," *Journal of the Royal Microscopical Society*, **129** (1929), 129-41. • *Catalogue of Portraits of Naturalists*: 505-6 [2 portraits listed]. • DSB: **5**, 534-6 [by C.R. Metcalfe]. • Le Fanu, W.R., *Nehemiah Grew, M.D., F.R.S.: A study and bibliography of his writings*. Winchester, St. Paul's Bibliographies; Detroit, MI, Omnigraphics, 1990, xvii, 182 p. • Munk, W., *The roll of the Royal College of Physicians of London*. 2nd edition. London, 1878. 3 vols. • Poggendorff: **1**, col. 952. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



MUSEUM REGALIS SOCIETATIS, 1681

1985. — English, 1681 [Collection catalog].

[Contained within a double rule box:] Musævm Regalis Societatis. | Or A | Catalogue & Description | Of the Natural and Artificial | Rarities | Belonging to the Royal Society | And preserved at | Gresham Colledge. | [rule] | Made | By Nehemiah Grew M.D. Fellow of the Royal Society, | and of the Colledge of Physitians. | [rule] | Whereunto is Subjoyned the | Comparative Anatomy | Of | Stomachs and Guts. | [rule] | By the same Author. | London, | Printed by W. Rawlins, for the Author, 1681.

2°: A⁶ B-Z⁴ Aa-Zz⁴ Aaa-Ddd⁴ 2A-2E⁴ 2F²; 224ℓ.; [12], 1-386, [6], 1-43, [1] p., frontispiece, 31 plates (one folding). PAGE SIZE: 315 x 192 mm.

CONTENTS: [Frontispiece]; [2 pgs], Title page, verso blank; [4 pgs], Dedication to "The Royal Society," signed N. Grew.; [3 pgs], "The | Preface."; [2 pages], "A Prospectus of the whole Work."; [1 pg], "Presenting Royal Society Resolutions about Grew's Catalog."; 1-384, Text.; 385-386, "Appendix. | Of some Particulars lately given by Dr. Christopher | Merret."; [1 pg], "An Index of some Medicines."; [1 pg], "A List of those who have Contributed to this Museum: | excepting some Names which are lost."; [2 pgs], Blanks.; [2 pgs], Title page of appended work, "[Within a double rule box:] The | Comparative Anatomy | Of | Stomachs and Guts | Begvn. | [rule] | Being Several | Lectures | Read before the | Royal Society. | In the Year, 1676. | [rule] | By Nehemiah Grew M.D. Fellow of the Royal Society, | and of the Colledge of Physitians. | [rule] | London, | Printed by W. Rawlins, for the Author, 1681." verso "An Advertisement to the Reader."; 1-42, Text.; 43,

"Some Notes upon the Tables."; [1 pg], Blank.; [At end], 31 plates.

PLATES: Frontispiece shows an engraved portrait of the head and shoulders within an oval frame sitting on a pedestal. Text at the bottom of the plate reads: "Daniel Colwal Armiger Musai Regalis Societatis Fundator." Tab 1, 5 figs. of skulls and an armadillo. Tab 2, 6 figs. horns, bones and rhinoceros hide. Tab 3, 4 figs. Tortoise shells. Tab 4, 2 figs. skeleton of crocodile and elephant tusk (folding). Tab 5, 3 figs. storks bills. Tab 6, 4 figs. head of albatros, eggs and bird's nest. Tab 7, 5 figs. fish. Tab 8, 5 figs. of fish and starfish. Tab 9, 8 figs. of shells. Tab 10, 9 figs. of shells. Tab 11, 10 figs. of shells. Tab 12, 9 figs. of shells. Tab 13, 13 figs. mostly of beetles. Tab 14, 8 figs. of seed pods. Tab 15, 5 figs. of seed pods and nut shells. Tab 16, 11 figs. of nut shells. Tab 17, 3 figs. of gourds and an acorn with leaves. Tab 18, 6 figs. of sponges. Tab 19, 7 figs. of teeth. Tab 20, 11 figs. of various stones. Tab 21, 7 figs. of marcasite and gypsum crystals. Tab 22, 6 figs. of copper and iron ores. Tab 23, 4 figs. of stomachs of weasels, cat and fox. Tab 24, 4 figs. of stomachs. Tab 25, 1 fig. of stomach. Tab 26, 3 figs. of stomachs. Tab 27, 2 figs. of stomachs. Tab 28, 2 figs. of stomachs. Tab 29, 4 figs. of stomachs. Tab 30, 6 figs. of stomachs. Tab 31, 2 figs. of stomachs.

SCARCE. Early collection catalog of the Royal Society of London's natural history specimens. This book contains relevant early botanical and natural history observations, and many of the plates depict minerals, crystals, shells, fishes, birds, insects and animal fossils. Many of the specimens, particularly the plants, were American in origin, especially from the West Indies. In fact, the first 386 pages comprise a detailed catalogue of the natural history specimens owned by the Royal Society and then housed at Gresham College. Grew divides this portion of the work into four parts: (1) animals, including human rarities, quadrupeds, serpents, birds, fishes, shells and insects, (2) plants, including trees, shrubs, herbs, mosses, mushrooms, and plants of the sea, (3) minerals, with descriptions of stones, including bezoar, corals, fossils, gems, metals, salt, amber and other sulfurs, and (4) artificial matters, including things related to chemistry and natural philosophy, mechanics, coins, and medicines. Appended at the end is another treatise on the comparative anatomy of stomachs and guts which is an early classic in the field. Some of the plates show specimens relevant to this section.

A frontispiece engraving of Daniel Colwall (who, as mentioned, financially supported the establishment of the museum) and 31 engraved plates (also paid for by Colwall) comprise the illustrations. Of these, 18 show plant and animal specimens; included are various skulls and skeletons, tortoise shells, a rattlesnake's rattle, preserved fish, birds' nests, shells, starfish, insects, nuts, sponges, and a specimen identified as "skin on ye Buttock of a Rhinoceros." Plates 19 and 20 show fossils (and two small chistolite sections); plates 21 and 22 show mineral specimens (including calcite, quartz, gypsum, silver, copper, hematite, and what appears to be cerussite or pyromorphite); and plates 23 through 31 show stomachs and intestines.

The text is divided into four major parts: (I) Animals, (II) Plants, (III) Minerals, and (IV) Artificial

Matters. All sorts of highly curious objects are represented: An Egyptian mummy given by Prince Henry, Duke of Norfolk; a human fetus; the "Throttle Bone of a male Aquiqui" monkey; tiger claws; a stuffed "Pigheaded Armadillo", the "Horns of a Hare" ("So I find them inscribed," says the author, "Although it is probable that they are the homes of a small kind of German Deer"); a 7/2 foot crocodile (stuffed); the leg of a dodo; more than 30 lodestones; a porpoise skeleton; butterflies; coins; and a wide array of scientific and mechanical instruments and devices. There is an index of medicines, and a list of donors.

The catalog gives a good view of the extent of mineralogical knowledge in England three centuries ago. Grew made a crude effort at categorizing the fossil and mineral specimens, firstly into three broad divisions: (1) Stones (fossils, gems, "stones regular," and "stones irregular"), (2) Metals (gold, silver, copper, tin, lead, iron, antimony, mercury, etc.), and (3) "Mineral Principles" (salts, "sulphurs" and "earths"). In the first division, he attempted to distinguish gems by their colors, "stones regular" by the external shapes, and "stones irregular" by their hardness. These distinctions served him poorly and resulted in an irrational jumble, but inasmuch as the proper tools did not yet exist for structuring a rational crystallochemical classification, he can hardly be criticized for his approach.

He then gives a brief description of each specimen. Although he had available very little established descriptive terminology, he plunged ahead, coining his own terms where necessary and drawing frequently on the pre-existing reference works. Grew's citations show that he was well-versed in the early mineralogical literature, such as it was. He refers regularly to Agricola, and also Johannes Kentmann (1565). Pliny, Tavernier, Gesner, de Boodt, de Laet, Robert Boyle and Kircher are all cited.

REFERENCES: Le Fanu, W.R., *Nehemiah Grew, M.D., F.R.S.: A study and bibliography of his writings*. Winchester, St. Paul's Bibliographies; Detroit, MI, Omnigraphics, 1990, xvii, 182 p. • Murray, *Museums*, 1904: 1, 31, 44, 55, 59, 81 & 2, 267. • Nissen (ZBI): no. 1714. • Pritzel, *Thesaurus Literaturæ Botanicæ*, 1871-3: no. 3558. • Roller & Goodman, *Catalogue*, 1976: 1, 486. • Wellcome Catalog (Books): 3, 164. • Wilson, W.E., "Nehemiah Grew's Musaeum Regalis Societatis, 1681," *Mineralogical Record*, 22 (1991), 333-40.

1986. Reissue, 1694: Museum Regalis Societatis or a Catalogue & Description Of the Natural and Artificial Rarities Belonging to the Royal Society and preserved at Gresham Colledge. Made By Nehemiah Grew M. D. Fellow of the Royal Society, and of the Colledge of Physitians. Whereunto is Subjoyned the Comparative Anatomy of Stomachs and Guts. By the same Author. London: Hugh Newman, 1694.

2°: A8 (lacking one blank leaf; the leaves of signature A are variously ordered in different copies, this one thusly by the Rectos: portrait of Daniel Colwal, Title, Dedication to the Royal Society, Epistle Dedicatory to Daniel Colwal – the only signed leaf, with mark A3, The Preface, The Preface continued, A prospect of the whole Work of the Musaeum continued), B-Z4 (B1 has two inch tear that does not however affect readability), Aa-Zz4, Aaa-Ddd4 (Ddd3, blank, present), A-E4, F2. Between signatures A and B are bound thirty full-paged engraved plates and one folding plate of the marvelous and exotic subjects of the

GRIFFIN

collections of the Royal Society. PAGE SIZE: 315 x 192 mm.
VERY SCARCE.

CONTENTS: [14], 386, [4], 43 p., 31 plates.

GREWINGK, Constantin Caspar Andreas. (BORN: Fellin, Livland, Finland?, 2 January 1819; DIED: Dorpat, Russia [now Tartu, Estonia], 18 June 1887) *Finnish mineralogist.*

From 1857, Grewingk was an ordinary professor of mineralogy at the University of Dorpat.

REFERENCES: ADB. • Baltisches Biographisches Archiv: 104, 104-121. • *Deutschbaltisches Biographisches Lexikon*. • Levickij, G.V., *Biograficeskij slovar' professorov i prepodavatelej imperatorskago Jur'evskago byvego Derptskago universiteta ...* (1802-1902). Jur'ev, 1902-3. 2 vol. • Poggendorff: 4, 533. • WBI.

1987. — German, 1863 [Collection catalog].

Das | mineralogische Cabinet | der | Kaiserlichen Universität Dorpat | von | C. Grewingk, | d.Z. Director desselben. | [ornate rule] | Dorpat, | Gedruckt bei E.J. Karow, Universitäts-Buchhändler. | [rule] | 1863.

8°: π^2 1⁴ **8 2⁴ **8 3⁶ 4⁴ 5⁶ 6¹² 7⁶; 60ℓ.; [4], [1]-116 p., folding plan (Grundriss | des | Mineralocischen | Cabinets | Der | Kaiserlichen Universitaet | Dorpat. | 1863.). PAGE SIZE: 193 x 125 mm.

CONTENTS: [2 pgs], Title page, verso "Gedruckt auf Verfügung des Conseils der Kaiserlichen Universität Dorpat..."; [1 pg], "Inhaltsverzeichniss."; [1 pg], Blank.; [1]-116, Text.; [At end], Folding plan.

RARE. The catalog's text begins by providing general information about the mineral collection as it existed at the University of Dorpat in 1863, including a history of the collection from 1802 to 1863. The text then commences with a listing of the various collections.

REFERENCES: BL. • NUC.

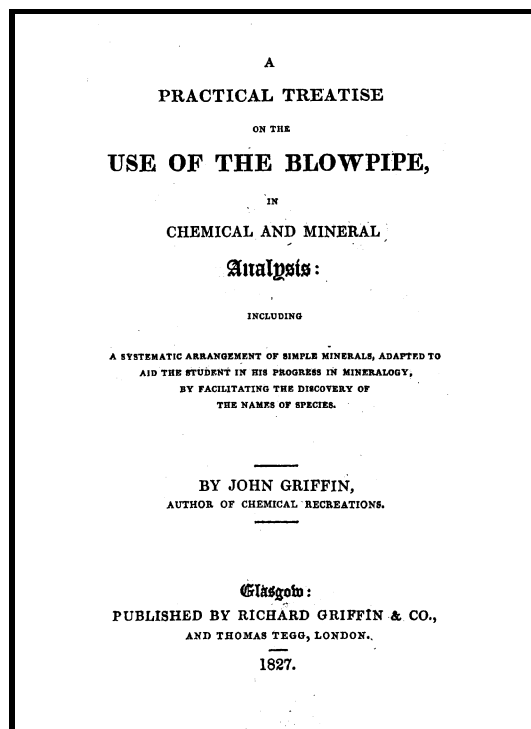
GRIFFIN, John Joseph. (BORN: London, England, 22 January 1802; DIED: London, England, 9 June 1877) *English chemist, author & publisher.*

Griffin received an early education in chemistry in Paris and Heidelberg. His family determined that he would enter business, and therefore, Griffin was apprenticed as a bookseller to the firm of Tegg & Co. After his 1832 marriage, he opened with his eldest brother an establishment in Glasgow. From these premises, Griffin became a successful bookseller, publisher and a dealer in chemical apparatus. In 1852, the partnership was disjoined. The publishing branch was continued by Griffin's nephew as Charles Griffin & Co. and the firm of chemical apparatus dealers was moved to London and became J.J. Griffin & Sons. Griffin's interest in chemistry caused him to translate Heinrich Rose's *Handbuch der analytischen Chemie* (??,??). He also assisted in the foundation of the Chemical Society in 1840. Throughout his life, Griffin always attempted to popularize chemistry.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 488, 168-172; I 488, 173. • Boase, *Modern English Biography*, 1892-1921. • DNB: 23, 227. • Poggendorff: 1, col. 953 & 3, 549. • Waller, *Dictionary of Universal Biography*, 1857-63. • WBI.

1988. — English, 1827.

A | Practical Treatise | on the | Use Of The Blowpipe, | in | Chemical And Mineral | Analysis: | including | a systematic arrangement



PRACTICAL TREATISE, 1827

of simple minerals, adapted to | aid the student in his progress in mineralogy, | by facilitating the discovery of | the names of species. | [rule] | By John Griffin, | Author Of Chemical Recreations. | [rule] | Glasgow: | Published By Richard Griffin & Co., | And Thomas Tegg, London. | [rule] | 1827.

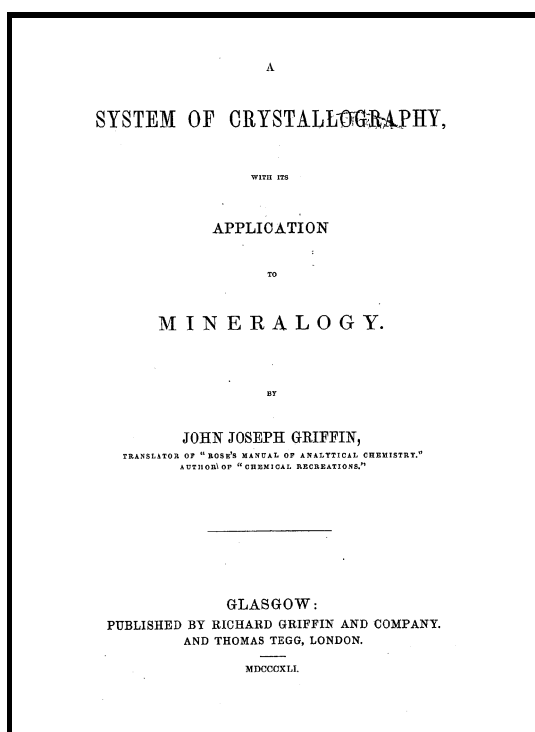
12° in 6s: π^3 b⁴ c² A-Z⁶ 2A⁶ 2B⁴ 2C⁶; 163ℓ.; [2], [i]-xvi, [1]-308 p., extra engraved title page, 5 plates. PAGE SIZE: 148 x 90 mm.

CONTENTS: [2 pgs], Engraved title page, verso blank.; [i-ii], Title page, verso "Malcolm & Griffin, Printers, Glasgow."; [iii]-xii, "Introduction."—dated 1 September 1827.; [xiii]-xvi, "Table of Contents."; [1]-288, Text.; [289]-299, General index.; 299-307, Mineral index.; 307-308, Index to the figures on the plates.

RARE. This work is the first independent work on the application of the blowpipe in English, and the first published work by its author. Its purpose was to first be a manual of instruction on the manipulation of the blowpipe and second to be an introduction to the determination of mineral species. The introduction gives a philosophical overview of mineralogical classification that is applied in the third part of the work. The text divided into four parts then begins. Covering pages 1 to 91, the first section is a practical treatise on the blowpipe. It begins with an history of the blowpipe. Following this are descriptions of the various types of instrumments, the flames employed for reactions, exterraneous apparatus used with the blowpipe, and the operations performed

with the blowpipe, and various views of the reactions of minerals before the flame. Part two describes in summary on pages 92 to 142, the reactions of various elements that commonly make up minerals and their behavior before the blowpipe. Part three (pages 143 to 268) gives a systematic arrangement of simple minerals. The fourth section covering miscellanea describes the use of other types of blowpipes in actually determining the composition of a mineral. Included are Lavoisier's, Hare's, Clarke's, Gurney's, Toft's and Phillips' "Spirit Lamp." Two comprehensive indexes close the book.

REFERENCES: Cole, *Chemical Literature*, 1988: no. 588. • Partington, *History of Chemistry*, 1961-70: 4, ?? • Roller & Goodman, *Catalogue*, 1976: 1, 486. • Zeitlinger & Sotheran, *Bibliotheca Chemica*, 1921-52: cat 887, no. 873.



SYSTEM OF CRYSTALLOGRAPHY, 1841

1889. — English, 1841.

A | System Of Crystallography, | With Its | Application | To | Mineralogy. | By | John Joseph Griffin, | Translator of "Rose's Manual Of Analytical Chemistry." | Author of "Chemical Recreations." | [rule] | Glasgow: | Published By Richard Griffin And Company. | And Thomas Tegg, London. | [rule] | MDCCCXLI.

8° in 4s: π^4 b-c⁴ d³ B-Z⁴ 2A-2X⁴ 2Y² a-s⁴ χ^2 ; 263ℓ.; [i]-xxvii, [3], [1]-346, [2], [1]-143, [1] blank, [4] p., text figures, adverts. PAGE SIZE: 222 x 135 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii-vi], "Contents."; [vii]-xxvii, "Preface."—dated 2 November 1840.; [1 pg], Blank.; [1 pg], "Part I. | [rule] | Principles Of

Crystallography."; [1 pg], Blank.; [1]-336, Text.; [337]-346, "Table Of Sines And Tangents."; [1 pg], "Part II. | [rule] | Application Of Crystallography | To | Mineralogy."; [1 pg], Blank.; [1]-137, Text.; [138], Blank.; [139]-143, "Index."; [1 pg], Blank.; [4 pgs], Advertisements.

SCARCE. A comprehensive treatise on crystallography, claiming to be the first to easily classify minerals. After discussing the difficulties of other texts, Griffin introduces his own system. The first part is theoretical. It describes the principals of crystallography including axes of crystals, prisims and pyramids and their combinations, classification of crystals, a new system of crystallographic notation, cleavage, primitive forms, simple forms and combinations, a theory of crystallization, application of trigonometry to crystallography, and logarithmic tables. The second part treats the applications of crystallography to mineralogy. A tabular arrangement of minerals according to Gustav Rose's [q.v.] method of six systems of axes of crystallization is presented. This is followed by a catalog of crystallized minerals, showing the crystallographic combinations that occur in nature, and a systematic arrangement of crystals, with a list of the minerals common to each crystal form. A descriptive catalog of crystal models sold by the publishers is included at the end. An index to the minerals described ends the work.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 486.

GRILL, Adolph Ulrik. (BORN: Stockholm, Sweden, 19 March 1752; DIED: Stockholm, Sweden, 1 October 1797) *Swedish naturalist*.

Grill studied natural history subjects at the University of Söderfors. He possessed a large cabinet of natural history objects including about a hundred mammals, sixty birds, thirty fishes and lots of corals and petrifications. After having been offered for sale abroad, these collections were donated in 1828 to the Vetenskapsakademien in Stockholm. Grill was a member of the Swedish Musical and Scientific societies.

REFERENCES: SBA: Scandinavian Biographical Archive: B-093, 046-051. • *Svenskt Biografiskt Handlexikon*: 1, 403, portrait. • *Svenskt Biografiskt Lexikon*: 17, 288. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 173.

Museum Naturalium Grillianum, Söderforssiense Institutum 1783 & in Catalogo redactum ano 1788 a Petrus Gustavus Lindroth ... (Stockholm, 1788).

See: Lindroth, Petro Gustavo.

GRILL, Anthony. (BORN: Stockholm, Sweden, c1704; DIED: Amsterdam, The Netherlands, 22 March 1783) *Dutch merchant & banker*.

From 1722 onwards, Grill lived and worked in Amsterdam in the "Huys met de Hoofden." He possessed a natural history cabinet especially rich in minerals, which was sold after his death.

REFERENCES: *Amstelodamum*: 1951, p. 156 seq & May, 1976, p. 148 [by I.H. van Eeghen]. • *Bijdr. en Mededel. Hist. Gen. Utrecht*: 31 (1910), 329 [note]. • Engel, *Dutch Zoological Cabinets*, 1986: 101-2. • Wilson, *History of Mineral Collecting*, 1994: 173.

1990. — Dutch, 1728 [Sale catalog].

Catalogus | Van een extraordinair schoon en uytmuntendt | Kabinet | Van veelderlei ongemene Rariteiten, | Bestande in alderhande soorten van

Mineralien, so van | Goud, Solver als andere Metalen, op Goud geëmail- | jeerde Platen, Oriantaals Agaate Beeltjes, Borstbeel- | den en Tronitjesw van Keisers, Koningen, Veld- | oversstems, Philosophen en Poëten, zo uvt als | inwendig gesneden; een Schaal van Lapis | Lazuli, wiens weerga niet bekend is, | als veel andere Schaaltjes en Kelken | van Agaaten Berg Cristal. | Benevens een party Silvere en andere | Medailjes, | Zo van Vrankryk, Sweden, Moscovien, als deze | Nederlanden, van de beste Meesters gemaakt. | En een groote quantiteyt gedreven | Silverwerk, | Meest alle van die vermaarde Konstenaars Adam en Paul | van Via nen, zynde veelderhande soorten en Capitale Stuk- | ken, ook Goude en Silvere Filigryne Koffertjes, staande | en hangen de Orlogies, Goude en Silvere Sak-Orlogies, | waar van eenige konstig geëmailjeert; en een fraije | party Juweelen, Diamanten en Paarden. | Als mede | Een considerabel groot stuk Amber de Gris, en een ex- | traordinaar groot stuk West-Indisch Barnsteen, ook | eenige Oliteyten en andere Rariteyten meet. | Alles nagelaten door den Heer | Anthony Grill. | De Verkoopning zal geschieden door de Makelaars Johannes Ver- | kolije, Philip Steen en Gysbert Hol, op Woensdag, den 14 April 1728, ten huize van George Meyer, Casteleyn in 't Oudezyds Heere Lo- | gement, 's morgensten 9, en 's namiddags ten 2 uuren. Alwaar dit | beroemt Kabinet 2 dagen voor de Verkoping te bezien zai zyn. | De Catalogen zyn by de Makelaars te bekomen. | t'Amsterdam, by Johannes Ratelband.

2 parts. 8°: 52 p.

VERY RARE. Auction catalog of a sale held in Amsterdam on April 14, 1728 and subsequent days. This sale dispersed Grill's first natural history cabinet that contained a minerals, agates, and native specimens of gold and silver.

REFERENCES: BL: [S.C.467.(5.)]. • Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 1, 390. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 276. • Murray, *Museums*, 1904: 2, 267. • Wilson, *History of Mineral Collecting*, 1994: 212.

Musei Grilliani Catalogus, continens præstantissima, rarissima, pretiosissima omnis generis fossilia ... quæ ... collegit ... Anton Grill. ... publica sub hasta distrahent P. Posthumus et B. de Bosch ... (Amsterdam, 1776).

See: Engelbrommer, Carel Clemens Elias D'.

GRILL, Johannes. (BORN: Amsterdam, The Netherlands, 1614; DIED: Amsterdam, The Netherlands, 1670) *Dutch assayer*.

Dutch assayer and collector of minerals, shells, and coins in Amsterdam. He was either the father or grandfather of ANTHONY GRILL.

REFERENCES: Wilson, *History of Mineral Collecting*, 1994: 173.

1991. — Latin & Dutch, 1679 [Sale catalog].

Catalogus | Variorum & selectissimorum | Numismatum Graecorum, & Latinorum: | Nec Non | Metallorum ac Fossilium, Conchyliorum, & | Fruticum Marinorum, exquisitæ raritatis; | Quæ venalia proscribit | vidua Johannis Grill, | Metallorum, dum fuit, Exploratoris, | Amstelædami, | In platea Vitulina, vernacule de Halber-stræt/ | over de Gaperts-steegh. | [rule] | Naem-noemer | Van seer curieuse en rare soo Griek- | sche als Romeynsche, | Oude Medailles, | als oock van een uytstekent Cabinet | van ongemeen schoone en rare | Mineralen, Hoorentjens, Schelpen, | en Zee-gewassen, | Welcke uytterhandt te koop zijn by de | Weduwe van zair, | Johannes Grill, In zijn leven Essajeur/ in de Halver-stræt/ | Tor Amsterdam, 1679.

12°: A-C¹² D⁸; 44l.; [1]-87, [1] p. In Latin and Dutch. PAGE SIZE: 120 x 68 mm.

CONTENTS: [1-2], Title page, verso blank.; 2-87, Text.; [1 pg], Blank.

VERY RARE. Published postumously by his widow. Sale catalog of Johannes' collection of minerals, shells, and coins. The fossils and medals occupy only two pages.

REFERENCES: BL: [603.a.37.]. • Murray, *Museums*, 1904: 2, 268. • Wilson, *History of Mineral Collecting*, 1994: 173 & 213.

GRONAU, Karl Ludwig. (BORN: 1742; DIED: 1826) *German meteorologist*.

REFERENCES: ADB. • DBA: I 425, 181-192; II 482, 215-216. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • NDB. • *Neuer Nekrolog der Deutschen*. • Poggendorff: 1, col. 957. • WBI.

1992. — German, 1808.

Ueber die vom Himmel gefallen Steine von Carl Ludwig Gronau. Berlin und Leipzig, Dieterici & Mittler, 1808

8°: 40 p.

VERY RARE. On the stones reported to have fallen from heaven, otherwise called meteorites.

REFERENCES: BL: [no copy listed]. • Brown, *Bibliography of Meteorites*, 1953. • Burke, *Cosmic Debris*, 1986. • LKG: XVI 355. • NUC: [no copy listed].

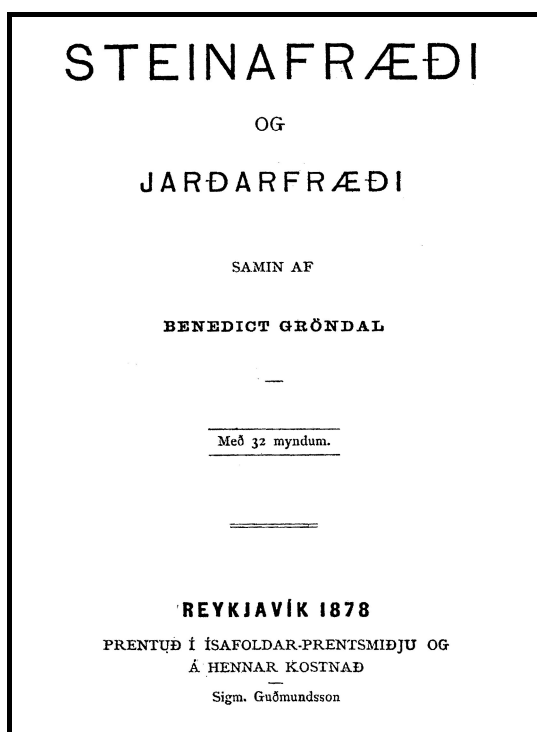
GRÖNDAL, Benedikt Sveinbjarnarson. (BORN: 1826; DIED: 1907) *Icelandic mineralogist*.

REFERENCES: *Dansk Biografisk Haandleksikon*. • *Dansk Biografisk Lexikon*. • SBA: Scandinavian Biographical Archive: A-374, 252-254. • WBI.

1993. — Icelandic, 1878 [First edition].

Steinafræði | Og | Jarðarfræði | Samin Af | Benedict Gröndal | [short rule] | [rule] | Med 32 myndum. | [rule] | [double rule] | Reykjavík 1878 | Prentuð í Ísafoldar-Prentsmiðju Og | Á Hennar Kostnað | [short rule] | Sigm. Guðmundsson.

8°: viii, xiv, [2], 128 p., 2 plates. Inngångsorð til náttúruvísindanna: p. i-xiv. Index: p. 123-128.



STEINAFRÆÐI, 1878

RARE. A mineralogical work written in Icelandic (Steindafræði=mineralogy). Various aspects of mineralogy including crystallography, and physical and chemical properties, together with a short descriptive section are treated on pages 1-94. A description of the most common rocks, almost all volcanic, occurs on pages 95-121. The work is illustrated with 32 illustrations, contained mostly on the two accompanying plates. This appears to be the first mineralogical text book for Icelandic students cast in a modern structure.

REFERENCES: BL. • NUC.

GRONOV, Johannes Fredericus. (BORN: Leiden, The Netherlands, 10 February (Baptized) 1686; DIED: Leiden, The Netherlands, 10 July 1762) *Dutch physician & naturalist.*

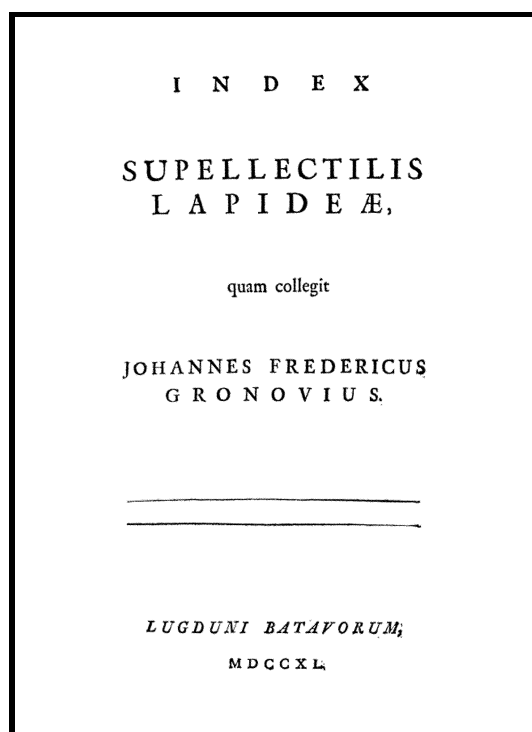
Father of LAURENTIUS THEODORUS. In 1725, Gronovius opened a medical practice in Leiden. He was often a Councillor, Alderman and Borgomaster of Leiden. A large natural history collection of all types was gathered by him, the greater part of which was inherited by son, Laurentius.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78: 7, 445. • Engel, *Dutch Zoological Cabinets*, 1986: no. 579. • Kobus, *Biographisch Woordenboek*, 1886: 1, 635. • NNBW: 1, col. 989. • Wilson, *History of Mineral Collecting*, 1994: 173.

1994. — Latin, 1740 [First edition].

Index | Supellectilis | Lapideæ, | quam collegit | Johannes Fredericus | Gronovius. | [double rule] | Lugduni Batavorum, | MDCCXL.

4°: π¹ A-C⁴ D³; 16ℓ.; [2], 1-29, [1] p.



INDEX, 1740

CONTENTS: [2 pgs], Title page, verso blank.; 1-29, Text.; [1 pg], Blank.

VERY RARE. This is the preliminary catalog of Gronov's growing collection of minerals, stones and fossils. In it, he indexes the specimens in his collection through a systematic approach. He divides the species into three divisions: (I) Petras sive Lapides Simples (pp. 1-3), (II) Mineras sive Lapides Compositos (pp. 4-13), and (III) Fossilia sive Lapides Aggregatos (pp. 14-29), which are the equivalent of simple stones, composite minerals and stones, and stone and mineral aggregates. There is no introductory text, leading to speculation that this rare work was circulated among his scientific friends for comment and commentary, in preparation of the expanded 1750 edition.

REFERENCES: BL: [444.c.31]. • Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 4, 48. • Freiesleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 11. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 277. • LKG: XV 14. • Murray, *Museums*, 1904: 2, 269. • NUC: [no copy listed]. • Soulsby, *Catalogue of the Works of Linneaus*, 1933-6: no. 3609.

1995. 2nd edition, 1750: Index | Supellectilis | Lapideæ, | quam collegit, | in Classes & Ordines digessit, | specificis Nominibus ac synonymis | illustravit | Johannes Fredericus | Gronovius. | Editio altera. | [double rule] | Lugduni Batavorum, | Apud Cornelium Haak, | MDCCCL. 8°; *7 A-B⁸ χ¹ C-G⁸; 90ℓ.; [14], [1]-160, [6] p.

RARE. Very much expanded and enlarged edition. This book is essentially a catalog of Gronov's mineral and fossil collection, that he classified with the helpful advice of Linneaus. Included in the descriptions are notes about the nomenclature of the rocks and minerals. Gronov had a large collection built up from correspondents from

GROSSCHEDEL VON AICHA

around the world. It is one of the earliest mineralogical works to document American localities, with numerous references to minerals found in Pennsylvania that had been supplied by the naturalist and botanist John Bartram [1699-1777]. There are also several minerals listed from Virginia; however, no indication is given of who supplied them. Besides being his friend Gronov was a patron of Linnaeus, to whom he dedicated this work. This second edition is the one more commonly encountered, although it is itself rare.

REFERENCES: BL: [B.550.(1.)]. • Boehmer, *Bibliotheca Historiæ Naturalis*, 1785-9: 4, 48. • Cobres, *Deliciæ Cobresianæ*, 1782: 1, 132. • *Commentarii Lipsiæ*: 1, 73. • Engel, *Dutch Zoological Cabinets*, 1986: no. 579. • Freisleben, *Sächsische Mineralien-Verzeichnisse*, 1828: no. 11. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 277. • Gronovius, *Bibliotheca Animalis atque Lapidei*, 1760: p. 116. • *Katalog Bergakademie Freiberg*, 1879: p. 250 [VI. 205. 8.]. • LKG: XV 14. • Löwegren, *Naturalienkabinett i Sverige*, 1952: p. 233. • Murray, *Museums*, 1904: 2, 269. • *Nova Acta Eruditorum*: 1750, p. 703. • NUC. • Soulsby, *Catalogue of the Works of Linnaeus*, 1933-6: no. 3610. • Wilson, *History of Mineral Collecting*, 1994: p. 68, 117 & 173.

GRONOV, Lorenz Theodor. (BORN: Leiden, The Netherlands, 1 June 1730; DIED: Leiden, The Netherlands, 8 August 1777) *Dutch lawyer & naturalist.*

Lorenz was the son of JOHANN FRIEDRICH GRONOV. Councillor and alderman of Leiden, he possessed an extensive cabinet of corals, fishes, lower animals, insects, reptiles, mammals, shells, stones, plants, etc. Elected a Fellow of the Royal Society of London in 1763, Gronov's library was sold on 5 October 1778, followed by his Museum on the 7 October.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78. • BAB: 278, 327-333. • Engel, *Dutch Zoological Cabinets*, 1986: 580-1. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Kobus, *Biographisch Woordenboek*, 1886: 1, 635-6. • Kobus, *Biographisch Woordenboek*, 1886. • Poggendorff: 1, cols. 957-8. • Stafleu & Cowan, *Taxonomic Literature*, 1976-88. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 173.

1996. — Latin, 1760 [First edition].

Bibliotheca | Regni Animalis | Atque | Lapidei, | Seu | Recensio Auctorum et Librorum, | Qui | De Regno Animalis & Lapideo Methodice, Physice, Medice, Chymice, Philologice, vel Theologice tractant, | in usum Naturalis Historiae Studiosorum | conscripta & edita | a Laurentio Theodoro Gronovio, J.U.D. | Societ. Phys. Medic. Basileensis Socio. | [ornament] | Lugduni Batavorum, | Sumptibus Auctoris. | MDCCCLX.

4°: π^4 A-Rr⁴ Ss³; 167 ℓ .; [8], [1]-326 p.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], Dedication.; [1 pg], Blank.; [2 pgs], "Præfatio."; [2 pgs], "Explicatio Notarum."; 1-287, Text.; 288-326, "Index Rerum."

RARE. This early and influential bibliography of the natural sciences focuses primarily on the animal and mineral kingdoms. It was designed to be used by students of natural history. The list was edited and published by the Dutch physician and naturalist Gronovius who relied primarily upon his own large library for compiling a large portion of the text. Entries include listings for his own well-known works on fish.

REFERENCES: BL: [433.b.12.]. • Bridson, *History of Natural History*, 1994: Cc29. • Dean, *Bibliography of Fishes*, 1916: ??, ?? • *Katalog Bergakademie Freiberg*, 1879: p. 250 [V. 92. 4.]. • LKG: I 2. • NLM 18th Century Books (Blake): 187. • Petzholdt, *Bibliotheca Bibliographica*, 1866: p. 545. • Roller & Goodman, *Catalogue*, 1976: 1, 488. • Wellcome Catalog (Books): 3, 169. • Wood, *Literature of Vertebrate Zoology*, 1931: 370.

Museum Gronovianum. Sive index Rerum Naturalium tam Mammalium Amphibiorum Piscium Insetorum Conchyliorum Zoophytorum Plantarum & Mineralium exquisitissimorum quam Arte factarum nonnullarum ... Inter quæ eminet Herbarius Siccus Plantarum a Tournefortio Claitonio Linnaeo aliisque Botanicis collectarum. Quæ omnia multa cura & magnis sumptibus sibi comparavit Vir Amplissimus & Celeberrimus Lorenz Theodor Gronovius (Leiden, 1778).

See: Meuschen, Friedrich Christian.

GROSSCHEDEL VON AICHA, Johann Baptist.

REFERENCES: DBA: I 426, 7; 426, 398. • Kobolt, *Baierisches Gelehrten-Lexikon*, 1795. • WBI.

1997. — Latin, 1629 [First edition].

Proteus | Mercurialis | Geminus, | Exhibens | Naturam Metallo- | rvm, id est, Operis Philoso- | phici Theoriam et eiusdem praxin siue | Compositionem Lapidis secreti per Philosophorum sententias & authori- | tates elucidatus. | Qvod Clarivs Ex Titvlis | unicuique tractatui præfixis, cuius legenti | facile patebit. | Per | Johannem Baptistam Gros- | schedelivm ab Aicha, Equitem | Romanum, Philosophum & Chymicum. | [ornament] | Francofvrti, | Sumptibus Lucae Jennisii, | [rule] | 1629.

8°: 195, [1] p.

RARE. An alchemical work, describing the mythical Philosopher's Stone and also giving valuable information on chemical manipulation, although cloaked in the dense alchemical prose. The second section describes a variety of metals and minerals used in alchemical experiments.

Each of the two parts has its own special title page: "Discursus philosophicus de natvra metallorvm, et lapide philosophorvm, ev vergis magiæ naturalis fundamentis depromptus, publicæque vtilitati traditus." (p. 9-104). and "Mineralis, seu, physici metallorvm lapidis diligens et accurata descriptio: ad macro- et microcosmi philosophicam metamorphosin." (p. 105-195).

REFERENCES: BL: [1033.f.28.]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 271. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 347-9. • Gmelin, *Geschichte der Chemie*, 1797-9: 1, p. 522, 562. • Hoefer, *Histoire de la Chimie*, 1866-9: 2, p. 319. • Kopp, *Die Alchemie*, 1886: 2, 338, 368. • LKG: XVI 68. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: p. 111. • Schmieder, *Geschichte der Alchemie*, 1927: p. 377. • VD17: 23:240724F.

1998. Another edition, 1706: *Proteus mercurialis geminus, exhibens naturam metallorum sive operis philosophici theoriam & ejusdem praxin, sive compositionem lapidis secreti.* Hamburgi, 1706.

8°: [16], 192 p. RARE.

REFERENCES: BL: [1033.f.50.]. • Bolton, *Bibliography of Chemistry*, Suppl. 1, 1899: p. 191. • LKG: XVI 68.

1999. — German, 1629.

Trifolium Hermeticvm: | Oder/ | Hermetisches
| Kleeblatt: | I. Von der allgemeinen Natur: |
II. Von der besondern/ und der Mensch=
lichen Kunst: | III. Von der verborgenen und
Geheimen | Weißheit: | In welchem das grosse
Buch der | Natur/ in seinen dreyen Reichen/
als nemb= | lichen/ dem Animalischen/ Vegeta-
| bilischen/ und Mineralischen/ aufgethan unnd
er= | klärt wird/ | Nach außweisung eines
jeden absonderlichen | beygefügtten Tittels an
seinem orth: | Durch | Iohannem Baptistam
Großschedel von | Aicha/ Equitem Romanum,
Philo- | chymicum. | Franckfurt am Mayn/ | In
Verlegung Lucæ Jennisii. | [rule] | Im Jahr/ M DC
XXIX.

3 parts in one volume. 8°: [ix], [1], 269, [1] p., 4 woodcut illus.

RARE. Offers an introduction to hermetic philosophy and a frank introduction to the magical arts, but containing some information on the natural world, including minerals. Each of the three tracts have separate title-pages. I. Erleuterung dess allgewaltigen grossen Buchs der Natur. II. Gründlich- und wahrhaftiger Bericht wie beydes die Natur und Kunst auss einem einigen Fundamento herkommen. III. Magiae Naturalis Declaratio.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 271. • Ferguson, *Bibliotheca Chemica*, 1906: 1, p. 347-9. • LKG: III 46. • NUC: [no copy listed]. • VD17: 23:239395Y. • Wellcome Catalog (Books): 1, no. 2946.

GROSSER, (Johann) Michael de. (BORN: 1740; DIED: 1810) *German jeweler.*

REFERENCES: DBA: I 427, 186-187; II 484, 198. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Thieme & Becker, *Allgemeines Lexikon*, 1907-50. • WBI.

2000. — Latin, 1777.

Phosphorescentia Adamantum Novis Experimentis Illustrata a Michaele de Grosser S.R.J.E. Viennae, Typis Joannis Thomae de Trattner 1777.

4°: 31, [1] p. Some on-line library catalogs give 8°: 47 p.

VERY RARE. New experiments illustrating the phosphorescence of diamonds.

French transl., 1779: "La phosphorescence du diamant," *Journal de Physique*, 20 (1779), p. 270-283.

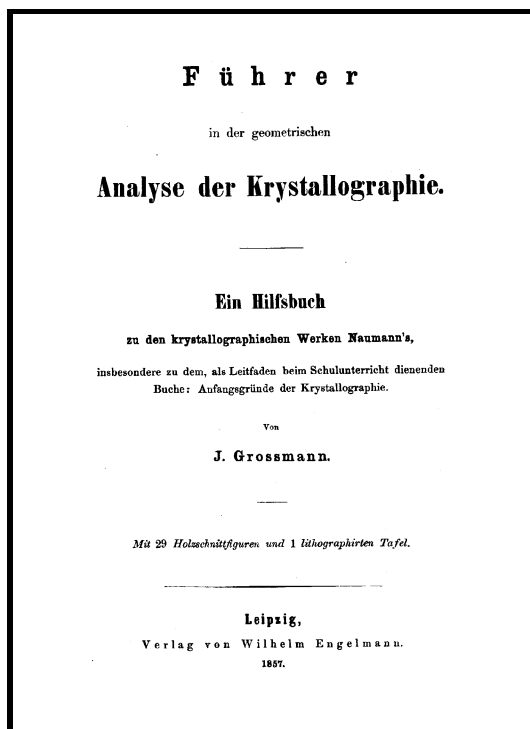
REFERENCES: BL: [B.404.(5.)]. • Dryander, *Catalogus Banks*, 1796-1800: 4, p. 254. • LKG: X 3. • Sinkankas, *Gemology Bibliography*, 1993: no. 2545 [not seen].

GROSSMANN, Ignacz. (BORN: Gönez-Ruszká, Abauj County, Hungary, 16 February 1823; DIED: Budapest, Hungary, 21 May 1866) *Hungarian physicist.*

Grossmann attended the University of Prague, devoting himself especially to mathematics and pedagogics. From 1847 to 1851 he was a teacher in Győr-Sziget, followed by two years attending the Josef technical school in Budapest. In 1854 he was appointed principal of the girls' school of the Pester Israelitische Religionsgemeinde. He was appointed In 1857 to a professorship in the

commercial school, where he remained until 1862, when he was made engineer of the Pest-Losonez-Zólyom Railroad Company. Grossmann was the inventor of the mercurial pneumatic pump, although others received credit. In 1854 he discovered a new method of gasometer construction.

REFERENCES: Internet search [11-12-05]. • *Jewish encyclopedia*: 6, 96. • *Magyar Életrajzi Lexikon*: 1, 625.



FÜHRER, 1857

2001. — German, 1857.

Führer | in der geometrischen | Analyse der Krystallographie. | [rule] | Ein Hilfsbuch | zu den krystallographischen Werken Naumann's, | insbesondere zu dem, als Leitfaden beim Schulunterricht dienenden | Buche: Anfangsgründe der Krystallographie. | Von | J. Grossmann. | [rule] | Mit 29 Holzschnittfiguren und 1 lithographirten Tafel. | [tapered rule] | Leipzig, | Verlag von Wilhelm Engelmann. | 1857.

8°: [i]-xii, [1]-138 p., one folding plate (diagrams). PAGE SIZE: 220 x 140 mm. uncut.

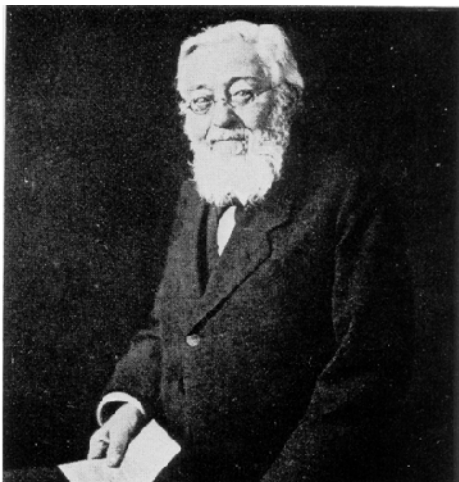
CONTENTS: [i-ii], Half title page, "Führer | in der geometrischen | Analyse der Krystallographie," verso blank.; [iii-iv], Title page, verso blank.; [v], Dedication.; [vi]-x, "Vorwort."—dated May 1857.; [xi]-xii, "Inhaltsverzeichniss."; [1]-138, Text.; [At end], One folding plate.

RARE. Grossmann wrote this book as a companion and enhanced explanation to Naumann's *Anfangsgründe der Krystallographie* (2nd ed., Leipzig, 1854). It begins with a short introduction to the

GROTH

geometric analysis of crystallography that reviews trigonometric and geometric principles. The first section then deduces the formulae through analytical geometry for the Planimetric and Stereometric. The second section, deduces the crystallographical formulae for the crystal systems of Tesseral, Tetragonal, and Hexagonal. A third section provides a combination of the first two sections.

REFERENCES: BL.



GROTH

GROTH, Paul Heinrich, Ritter von. (BORN: Magdeburg, Germany, 23 June 1843; DIED: Munich, Bavaria, Germany, 2 December 1927) *German mineralogist, crystallographer & geochemist.*

Groth studied at the Freiberg Bergakademie and at Dresden. In 1868, he received his Ph.D. in mineralogy from the University of Berlin. In 1872, Groth became professor of mineralogy at the University of Strasbourg. Then in 1883, he accepted an appointment to the University of Munich where he remained until his death. He founded in 1877, the important periodical, *Zeitschrift für Kristallographie*, which he edited until 1920.

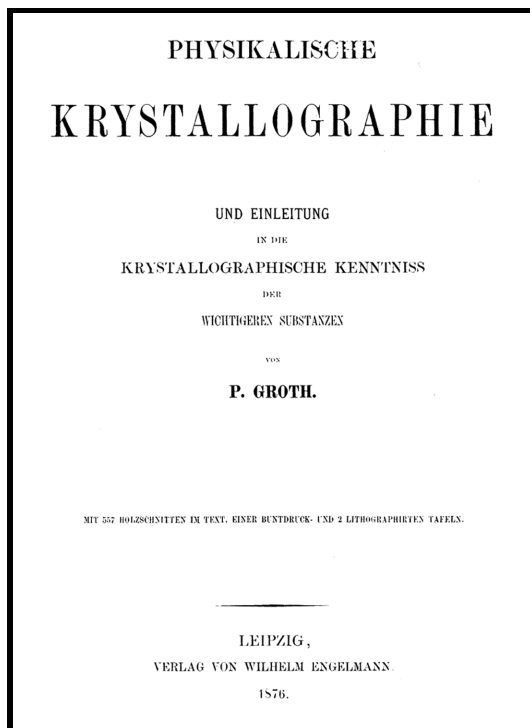
REFERENCES: *Almanach der Akademie der Wissenschaften in Wien*: 78 (1927), 207-11 [by F. Becke]. • *American Mineralogist*: 13 (1928), no. 3, 93-6, portrait [by E.H. Kraus]. • *Annual Register*. • *Atti Accad. Sci. Torino*: 68 (1928), 187 [by E. Repossi]. • Barr, *Index to Biographical Fragments*, 1973: 106. • DBA: II 485, 253-270. • DSB: 5, 556-8 [by W. Fischer]. • *Földtani Közlöny*: 58 (1929), 29 [by B. Mauritz]. • Laue, M.v., "Zu P. v. Groths 100 Geburtstage," *Zeitschrift für Kristallographie*, 105 (1943), 81. • *Mineralogical Magazine*: 22 (1930), 392-5 [by L.J. Spencer]. • NDB: 7, 167-8 [by G. Menzer]. • Poggendorff: 3, 553, 4, 539 & 5, 454. • *Proceedings of the Geological Society, London*: 1928, p. li. • *Proceedings of the Royal Society of London*: Series A, 119 (1929), p. xx-xxii. • Sarjeant, *Geologists*, 1980: 2, 1153-4. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 1, 339-41. • Steinmetz, H. and L. Weber, "Paul von Groth. Der Gründer der 'Zeitschrift für Kristallographie' (1843-1927)," *Zeitschrift Kristallographie und Kristallgeometrie*, 100, 5-46. • Steinmetz, H., "P.v. Groth," *Naturwissenschaften*, 31 (1943), 281-5, portrait. • WBI. • *World Who's Who in Science*: 1734.

2002. — German, 1875.

Über das Studium der Mineralogie auf den Deutschen Hochschulen von Paul Groth. Strassburg, K.J. Trübner; London, Trübner, 1875.

8°: 22 p. VERY SCARCE.

REFERENCES: NUC.



PHYSIKALISCHE KRYSTALLOGRAPHIE, 1876

Physikalische Krystallographie

2003. — German, 1876 [First edition].

Physikalische | Krystallographie | Und Einleitung | In Die | Krystallographische Kenntniss | Der | Wichtigsten Substanzen | Von | P. Groth. | [rule] | Mit 557 Holzschnitten Im Text, Einer Buntdruck- Und 2 Lithographirten Tafeln. | [tapered rule] | Leipzig | Verlag Von Wilhelm Engelmann. | 1876.
8°: π^8 1-33⁸ χ^1 ; 273 ℓ .; [i]-xvi, [1]-527, [3] p., 557 illus., 3 folding plates (one colored), index. PAGE SIZE: 222 x 150 mm.

CONTENTS: [i-ii], Half title page, "Physikalische | Krystallographie." verso blank.; [iii-iv], Title page, verso rights reserved.; [v]-xii, "Vorwort."—dated November 1875.; [xiii]-xvi, "Inhaltsverzeichnis."; [1], "I. Abtheilung. | [rule] | Die Physikalischen Eigenschaften | Der Krystalle."; [2], Blank.; [3]-152, Text.; [153], "II. Abtheilung. | [rule] | Die Geometrischen Eigenschaften | Der Krystalle."; [154], Blank.; [155]-452, Text.; [453], "III. Abtheilung. | [rule] | Die Apparate Und Methoden | Zu Krystallographisch-Physikalischen | Untersuchungen."; [454], Blank.; [455]-512, Text.; [513]-517, "Anhang. | [rule] | Vergleichnungstabelle der

krystallographischen Bezeichnungen | von | Naumann, Miller und Levy.; [518]-523, "Alphabetisches Register."; [524]-527, "Preisverzeichniss | der krystallographischen und petrographischen | Apparate und Utensilien | von | R. Fuess."; [1 pg], "Erläuterung der Tafeln."; [2 pgs], "Verbesserungen und Zusätze."; [At end], 3 folding plates.

PLATES: The three folding lithographic plates have their "Tafel" number located in the upper right-hand corner. There are no descriptions on the plates; however, each illustration is signed at the bottom.

Tafel I. [Colored; showing 13 figures of interference diagrams, signed P. Groth del. Buchdruckerei von G. Fischbach, in Strassburg]. Tafel II. [Shows 7 figures of one and two circle goniometers, signed P. Groth del. Lith. Anst. v. J.G. Bach, Leipzig]. Tafel III. [Shows 10 figures of mineralogical microscopes and their components, signed P. Groth del. Lith. Anst. v. J.G. Bach, Leipzig].

VERY SCARCE. Groth was professor of mineralogy at the University of Munich, who inspired a generation of other crystallographers with his vivid, and well organized lectures. He was one of the outstanding crystallographers of his age, publishing numerous articles and several editions of the work described here. This is perhaps his most important and lasting contribution explaining in great depth the connections between chemical composition of minerals and their crystal structure. This textbook and its subsequent editions were used by every important crystallographer and mineralogist of the time, and Groth's format was adopted, knowingly or unknowingly, by many subsequent authors. The book described here is based upon his lectures on the subject supplemented by an excellent, heavily illustrated, section on the theory and use of various scientific instruments (goniometers etc.) used in mineralogical research. On its publication, the work was deservedly praised for its clear explanations, and it is frequently cited in publications that came after its appearance.

The text is divided into three major sections. I. *The physical properties of crystals*, including the descriptions of the optical, thermal, magnetic and electrical properties of crystals. II. *The geometrical properties of crystals*, including detailed discussions of the seven crystal systems, and their minerals. III. *The apparatus and methods of physical crystallography investigations*, includes information on goniometers, instruments for measuring polarization, stauroscopes, angle measurements, and crystallographic projections, including the drawing of crystals. This section contains wonderful steel engraved illustrations of the apparatus.

REFERENCES: NUC. • Roller & Goodman, *Catalogue*, 1976: 1, 489. • *USGS Library Catalog*.

2004. 2nd edition, 1885: Physikalische | Krystallographie | Und Einleitung | In Die | Krystallographische Kenntniss | Der | Wichtigsten Substanzen | Von | P. Groth. | [rule] | Zweite, Umgearbeitete Und Vermehrte Auflage. | Mit 631 Holzschnitten Im Text Und Einer Buntdruck-Tafeln | [tapered rule] | Leipzig | Verlag Von Wilhelm Engelmann | 1885.

8°: 725 p., 631 figs., one chromolithographic plate.

VERY SCARCE. Much expanded edition covering the same material, and reflecting the advances made in the science of crystals during the past decade.

REFERENCES: NUC. • *USGS Library Catalog*.

2005. 3rd edition, 1895: Physikalische | Krystallographie |

Und Einleitung | In Die | Krystallographische Kenntniss | Der | Wichtigsten Substanzen | Von | P. Groth. | Dritte Neubearbeitete Auflage | Mit 702 Holzschnitten Im Text Und Drei Buntdruck-Tafeln | [tapered rule] | Leipzig | Verlag Von Wilhelm Engelmann | 1895.

8°: π^8 1-498 χ^1 ; 401 ℓ ; [i]-xvi, [1]-783, [2], [1] blank p., 702 illus., 3 plates, name index, subject index. PAGE SIZE: 230 x 150 mm.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso rights reserved.; [v]-x, "Vorwort."; [xi]-xiv, "Inhaltsverzeichnis."; [xv]-xvi, "Berichtigungen."; [1], "I. Abtheilung. Die Physikalischen Eigenschaften der Krystalle."; [2], Blank.; [3]-163, "Die optischen Eigenschaften der Krystalle."; [164]-187, "Die thermischen Eigenschaften der Krystalle."; [188]-198, "Die magnetischen und elektrischen Eigenschaften der Krystalle."; [199]-241, "Die Einwirkung mechanischer Kräfte auf die Krystalle."; [242]-285, "Die Molekularstruktur der Krystalle."; [286], Blank.; [287], "II. Abtheilung. Die Geometrischen Eigenschaften der Krystalle."; [288], Blank.; [289]-331, "Allgemeiner Theil."; [332]-522, "Specieller Theil."; [523]-534, "Anhang. Vergleichungstabelle der Systematik, Nomenclatur und Bezeichnung der Krystallformen von Miller, Weiss, Naumann und Lévy."; [535], "III. Abtheilung. Krystallberechnung. Apparate und Methoden zu krystallographisch-physikalischen Untersuchungen."; [536], Blank.; [537]-601, "Berechnung und graphische Darstellung der Krystallformen."; [602]-682, "Krystallmessung. Goniometer und Refractometer."; [683]-764, "Optische Untersuchung der Krystalle im polarisirten Lichte."; [765]-771, "Anhang. Preisverzeichnisse der Lieferanten von Apparaten, Modellen, Krystallen und Präparaten."; [772]-775, "Namenregister."; [776]-783, "Sachregister."; [1 pg], "Druck von Breitkopf & Härtel in Leipzig."; [1 pg], "Erläuterung der Tafeln."; [At end], 3 plates.

VERY SCARCE. Enlarged by more than 150 pages over the previous edition, reflecting the depth of the discoveries made during the previous decade.

REFERENCES: NUC. • *USGS Library Catalog*.

2006. 4th edition, 1905: Physikalische | Krystallographie | Und Einleitung | In Die | Krystallographische Kenntniss | Der | Wichtigsten Substanzen | Von | P. Groth | Vierte, Neubearbeitete Auflage | Mit 750 Abbildungen Im Text Und 3 Buntdrucktafeln | Leipzig | Verlag Von Wilhelm Engelmann | 1905.

8°: [i]-xiv, [1]-820 p., 3 colored plates (one folding). PAGE SIZE: 230 x 150 mm.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso "Das Recht..."; [v]-viii, "Vorwort"—dated March 1905.; [ix]-xii, "Inhaltsverzeichnis."; [xiii]-xiv, "Berichtigungen und Ergänzungen während des Druckes."; [1]-801, Text.; [802], Blank.; [803]-811, "Anhang."; [812]-820, "Alphabetisches Register."; [At end], 3 folding plates.

VERY SCARCE. Continues on the same format and topics as the earlier editions, and is equally well illustrated with crystal drawings and renderings of crystallographical instruments. This is one of the last important textbooks of crystallography published before the X-ray diffraction experiments of Von Laue performed in 1912 showed the internal structure of crystals, and is therefore an important source providing the best, current theories of atomic arrangements in crystals before it could actually be seen.

Sections: I. Die Eigenschaften der Krystalle (Allgemeine physikalische Krystallographie) . II. Systematische Beschreibung der Krystalle (Specielle physikalische Krystallographie) . III. Die Methoden zur Untersuchung der Krystalle.

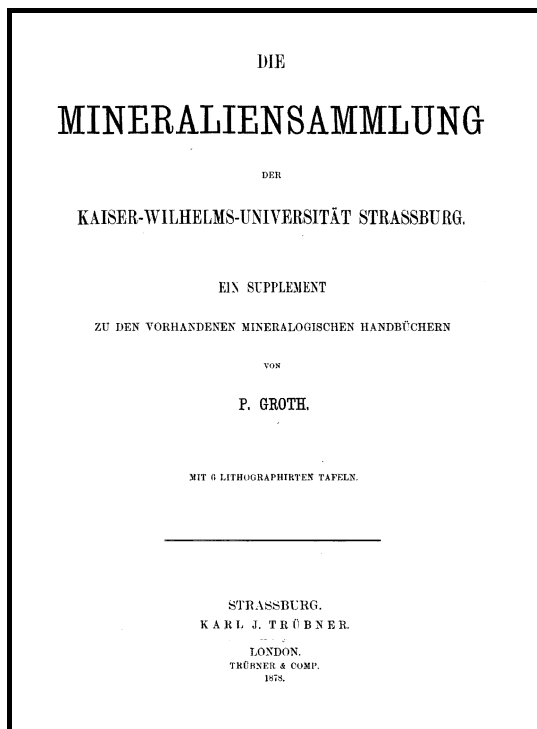
REFERENCES: NUC. • *USGS Library Catalog*.

2007. English transl., 1910: The Optical Properties | Of | Crystals | With A General Introduction To Their | Physical Properties | Being Selected Parts of the | Physical Crystallography | By | P. Groth | [...2 lines of titles and memberships...] | Translated (with the Authors Permission) from the | Fourth, Revised and Augmented

GROTH

| German Edition | By | B.H. Jackson, M.E., M.A. | University of Colorado | With 121 Figures in the Text and Two Colored Plates | First Edition | First Thousand | New York | John Wiley & Sons | London: Chapman & Hall, Limited | 1910.

8°: xiv, 309 p., illus., diags. VERY SCARCE.
REFERENCES: NUC. • *USGS Library Catalog*.



DIE MINERALIENSAMMLUNG, 1878

2008. — German, 1878 [Collection catalog].

Die | Mineraliensammlung | Der | Kaiser-Wilhelms-Universität Strassburg. | Ein Supplement | Zu Den Vorhandenen Mineralogischen Handbüchern | Von | P. Groth. | Mit 6 Lithographirten Tafeln. | [rule] | Strassburg. | Karl J. Trübner. | [rule] | London. | Trübner & Comp. | 1878.

4°: [i]-x, [1]-271, [1] p., 6 plates (each with descriptive letterpress). PAGE SIZE: 285 x 200 mm.

CONTENTS: [i-ii], Title page, verso "Buchdruckerei von G. Otto in Darmstadt."; [iii]-x, "Vorwort"—signed P. Groth, April 1878.; [1]-261, Text.; [262]-263, "Berichtigung und Nachträge."; [264]-271, "Register."; [1 pg], Blank.; [At end], 6 plates with interspersed letterpress.

RARE. Descriptive catalog of the mineral collection at the Kaiser Wilhelm University in Strassburg.

REFERENCES: Dana's 7th (Bibliography): 72. • NUC. • *USGS Library Catalog*.

Einleitung in die Chemische Krystallographie

2009. — German, 1904 [First edition].

Einleitung | In Die | Chemische Krystallographie | Von | P. Groth | Mit 6 Textfiguren | Leipzig | Wilhelm Engelmann | 1904.

8°: [i]-iv, [2], [1]-80 p. PAGE SIZE: 240 x 190 mm.
CONTENTS: [i-ii], Title page, verso "Alle Rechte..."; [iii]-iv, "Vorwort."; [1 pg], "Inhaltsverzeichnis."; [1 pg], Blank.; [1]-78, Text.; [79]-80, "Register" (includes minerals and chemicals).

VERY SCARCE. In this introduction to chemical crystallography written before the advent of X-ray crystallography, Groth discusses the current theory on crystal structure, polymorphism and isomorphism, and thoughts on how molecules combine to form crystals.

REFERENCES: BL. • NUC. • *USGS Library Catalog*.

2010. English transl., 1906: An Introduction To | Chemical Crystallography | By | P. Groth | Professor Of Mineralogy And Crystallography In The University Of Munich | Authorised Translation | By | Hugh Marshall, D.Sc., F.R.S. | Lecturer On Chemistry And On Mineralogy And Crystallography | In The University Of Edinburgh | London | Gurney & Jackson | 1906.

8°: a⁶ A-G⁸ H⁶; 68⁸.; [i]-vii, [1] blank, [1], [1] blank, [1], [1] blank, [1]-123, [1] p., 6 figures, index. PAGE SIZE: 192 x 130 mm.

CONTENTS: [i-ii], Half title page, "Chemical Crystallography," verso blank.; [iii-iv], Title page, verso blank.; [v]-vii, "Preface"—signed P. Groth, September 1904.; [1 pg], Blank.; [1 pg], "Translator's Note."; [1 pg], Blank.; [1 pg], "Contents."; [1 pg], Blank.; [1]-118, Text.; [119]-123, "Index."; [1 pg], "Printed by | Oliver and Boyd | Edinburgh."

VERY SCARCE. Translation by Hugh Marshall of *Einleitung in die chemische Krystallographie* (München, 1904).

Hugh Marshall. (BORN: 1868; DIED:) *English chemist.*

REFERENCES: NUC. • *USGS Library Catalog*. (Marshall) BBA: I 742, 438. • Stephenson, *Who's Who in Science*, 1913. • WBI.

Chemische Krystallographie

2011. — German, 1906-19.

Chemische | Krystallographie | Von | P. Groth | Erster Teil | Elemente — Anorganische Verbindungen Ohne Salz- | Charakter — Einfache Und Complexe Halogenide, | Cyanide Und Azide Der Metalle, Nebst Den Zuge- | Hörigen Alkylverbindungen | Mit 389 Textfiguren | Leipzig | Verlag Von Wilhelm Engelmann | 1906.

[TITLE PAGE OF VOLUME 2 READS:]

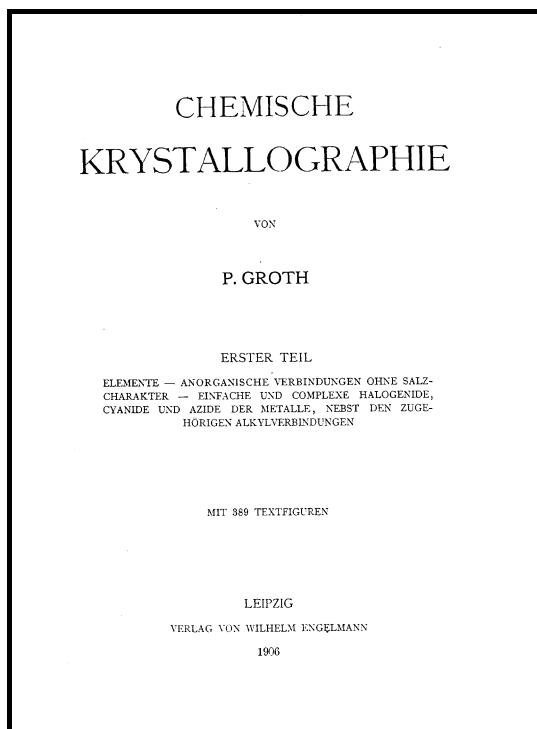
Chemische | ... | Zweiter Teil | Die Anorganischen Oxo- Und | Sulfosalze. | Mit 522 Textfiguren | ... | 1908.

[TITLE PAGE OF VOLUME 3 READS:]

Chemische | ... | Dritter Teil | Aliphatische Und Hydroaromatische | Kohlenstoffverbindungen | Mit 648 Textfiguren | ... | 1910.

[TITLE PAGE OF VOLUME 4 READS:]

Chemische | ... | Vierter Teil | Aromatische Kohlenstoffverbindungen | Mit Einem Benzolringe | Mit 828 Textfiguren | ... | 1917.



CHEMISCHE KRYSTALLOGRAPHIE, 1906

[TITLE PAGE OF VOLUME 5 READS:]

Chemische | ... | Fünfter Teil (Schluss) | Aromatische Kohlenstoffverbindungen | Mit Mehreren Benzolringe | Heterocyclische Verbindungen | Mit 955 Im Text | ... | 1919.

5 parts in 5 vols. [VOL 1: 1906] 8°: π^4 1-39⁸ 40¹; 317^l.; [i]-viii, [1]-626 p., 389 illus. (nos. 1-389), index; [VOL 2: 1908] 8°: π^4 1-57⁸ 58¹; 461^l.; [i]-vi, [1] errata, [1] blank, [1]-914 p., 522 illus. (nos. 390-911), index; [VOL 3: 1910] 8°: π^2 1-50⁸ 51²; 404^l.; [i]-iv, [1]-804 p., 648 illus. (nos. 912-1559), indexes; [VOL 4: 1917] 8°: π^4 1-50⁸ 51¹; 405^l.; [i]-viii, [1]-801, [1] p., 828 illus. (nos. 1560-2387), indexes; [VOL 5: 1919] 8°: π^4 1-66⁸ 67⁴; 536^l.; [i]-viii, [1]-1063, [1] p., 955 illus. (nos. 2388-3342), indexes. PAGE SIZE: 244 x 170 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso "Alle Rechte, besonders das der Übersetzung, sind vorbehalten"; [iii]-v, "Vorwort"; [vi]-viii, "Inhaltsverzeichnis"; [1]-42, "Elemente"; [43]-163, "Anorganische Verbindungen ohne Salzcharakter"; [164]-311, "Halogenide, Cyanide und Azide"; [312]-602, "Doppel- (und Tripel-) Halogenide und Cyanide"; [603]-606, "Nachträge und Berichtigungen"; [607]-626, "Alphabetische Register."

[Vol 2] [i-ii], Title page, verso "Alle Rechte, besonders das der Übersetzung, sind vorbehalten"; [iii]-vi, "Inhaltsverzeichnis"; [1] pg, "Berichtigungen und Nachträge"; [1] pg, Blank; [1]-17, "Cyanate und Thiocyanate"; [18]-56, "Nitrite (incl. Halogenonitrite) und deren Ammoniak- und Alkylsulfidverbindungen"; [57]-163, "Nitrate. Chlorate, Bromate, Jodate"; [163]-188, "Perchlorate, Permanganate, Perrutheniate und Prejodate"; [189]-224, "Carbonate"; [225]-286, "Silicate, Titanite, Zirkonate und Thorate"; [286]-295, "Stannate, Platinat, Plumbate. Tellu-

rate"; 295-296, "Osmiamate. Plumbite"; 296-307, "Sulfite, Selenite, Manganite"; 308-664, "Sulfate, Chromate, Manganate, Ferrate, Selenate, Molybdate, Wolframate und Uranate"; 664-728, "Polythionate und Salze der Sulfonsäuren"; [729]-769, "Borate. Aluminate, Ferrite usw. Arsenite usw."; 769-785, "Hypophosphite. Phosphite. Hypophosphate"; 786-884, "Phosphate, Vanadate, Arsenate, Niobate, Antimonate und Tantalate"; [885]-914, "Alphabetisches Register."

[Vol 3] [i-ii], Title page, verso "Alle Rechte, besonders das der Übersetzung, sind vorbehalten"; [iii]-iv, "Inhaltsverzeichnis"; [1], "Aliphatische Kohlenstoffverbindungen"; [2], Blank; [3]-599, Text; [600], Blank; [601], "Hydrobenzolderivate und Terpene"; [602], Blank; [603]-768, Text; [769]-772, "Nachträge und Berichtigungen"; [773]-791, "Alphabetisches Register"; [792]-804, "Formelregister."—at end, "Druck von Breitkopf & Härtel in Leipzig."

[Vol 4] [i-ii], Title page, verso "Alle Rechte, besonders das der Übersetzung, sind vorbehalten"; [iii]-vi, "Vorwort."—signed P. Groth, March 1917; [vii]-viii, "Inhaltsverzeichnis"; [1]-764, "Text"; [765]-768, "Nachträge und Berichtigungen"; [769]-768, "Alphabetisches Register"; [787]-801, "Formelregister"; [1] pg, "Druck von Breitkopf und Härtel in Leipzig."

[Vol 5] [i-ii], Title page, verso "Alle Rechte, besonders das der Übersetzung, sind vorbehalten"; [iii]-vi, "Nachträge zu den früheren Bänden"; [vii]-viii, "Inhaltsverzeichnis des V. Teiles"; [1]-492, "Aromatische Kohlenstoffverbindungen mit mehreren Benzolringen"; [493]-1007, "Heterocyclische Kohlenstoffverbindungen"; [1008]-1009, "Berichtigungen und Ergänzungen"; [1010]-1039, "Alphabetische Register"; [1040]-1063, "Formelregister"; [1] pg, "Druck von Breitkopf und Härtel in Leipzig."

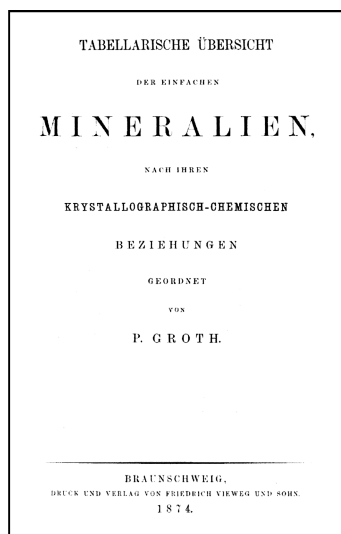
RARE. With the development of optical goniometry, polarized light microscopy, and other physical techniques, 19th-century chemists and crystallographers focused on macroscopic properties of crystals such as birefringence, optical activity, pyroelectricity (electric polarization caused by temperature change), and, later, piezoelectricity (electric polarization under external stress), which was discovered by Pierre and Jacques Curie in 1880. These efforts culminated in Groth's *Chemische Krystallographie*, which documents in five volumes what was known about the external form and physical properties of more than 7,000 organic and inorganic crystals that had been characterized by the beginning of the 20th century.

Groth was a pioneer in the development of the optical goniometer, and compiled the monumental collection of crystallographic data *Chemische Krystallographie*, in five volumes between 1906 and 1919. The volumes arranged by chemical compound tabulate the morphological, optical and other properties of over 7,000 crystalline substances (both organic and inorganic), but it contains no information about internal crystalline structures and no discussion of experimental techniques used to arrive at the data. It is a reference still used as a resource for organic chemists who investigate inclusion compounds. The later volumes, published during WWI concentrate on benzene ring structure and aromatic structures that was probably related to the manufacture of poison gas by the German chemists. There are over 3,300 crystal drawings of the described substances.

GROTH

Photo-reproduction reprint: *Chemische Krystallographie*. 5 Vols. 4°, 250 x 305 mm. (9.75 x 12 in). Red Cloth. The 5 volumes total 4,208 pages, with 3,342 “textfiguren.” This massive set, never for sale commercially, was brought to fruition by Dr. Ray Pepinsky, formerly of the Groth Institute of the Pennsylvania State University. It was intended to assist workers in the editing a planned revised edition of Groth.

REFERENCES: Dana’s 7th (Bibliography): 72. • NUC. • *USGS Library Catalog*.



TABELLARISCHE, 1874

Tabellarische Übersicht

2012. — German, 1874 [First edition].

Tabellarische Übersicht | Der Einfachen | Mineralien, | Nach Ihren | Krystallographisch-Chemischen | Beziehungen | Geordnet | Von | P. Groth. | [tapered rule] | Braunschweig, | Druck Und Verlag Von Friedrich Vieweg Und Sohn. | 1874.

4°: [i]-xx, [1]-120, [2] p. RARE.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso “Die Herausgabe einer Uebersetzung ...”; [v]-xvii, “Vorwort | und | Allgemeine Erläuterungen.”; [xviii], Blank.; [xix]-xx, “Inhalt.”; [1], Sectional title page, “I. | Übersichtstabelle | Der | Classen Und Gruppen.”; [2], Blank.; [3]-6, Text.; [7], Sectional title page, “II. | Tabelle | Der | Mineralien.”; [8], Blank.; [9]-70, Text.; [71], Sectional title page, “III. | Anmerkungen.”; [72], Blank.; [73]-108, Text.; [109]-120, “Register.”; [1 pg], “Verbesserungen und Zusätze.”; [1 pg], Blank.

REFERENCES: NUC. • *USGS Library Catalog*.

2013. 2nd edition, 1882: Tabellarische Übersicht der Mineralien nach ihren Krystallographisch-chemischen Beziehungen geordnet von P. Groth. Braunschweig, Druck und Verlag von Friedrich Vieweg und sohn, 1882.

4°: x, 134 p. VERY SCARCE.

REFERENCES: NUC. • *USGS Library Catalog*.

2014. 3rd edition, 1889: Tabellarische Übersicht | Der | Mineralien | Nach Ihren | Krystallographisch-Chemischen Beziehungen. | Geordnet | Von | P. Groth. | Dritte, | Vollständig Neu Bearbeitet Auflage. | [tapered rule] | Braunschweig, | Druck Und Verlag Von Friedrich Vieweg Und Sohn. | 1889.

4°: [i]-x, [1]-167, [1] p. VERY SCARCE.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso “Alle Rechte vorbehalten.”; [v]-vii, “Vorwort.”; [viii], Blank.; [ix]-x, “Inhalt.”; [1]-153, Text.; [154]-156, “Anhang.”; [157]-167, “Register.”; [1 pg], “Berichtigungen.”

REFERENCES: NUC. • *USGS Library Catalog*.

2015. 4th edition, 1898: Tabellarische Übersicht | Der | Mineralien | Nach Ihren | Krystallographisch-Chemischen Beziehungen | Geordnet | Von | P. Groth | [rule] | Vierte | Vollständig Neu Bearbeitete Auflage | [tapered rule] | Braunschweig | Druck Und Verlag Von Friedrich Vieweg Und Sohn | 1898.

8°: [i]-viii, [1]-184 p. PAGE SIZE: 264 x 190 mm.

CONTENTS: [i-ii], Half title page, “Tabellarische Übersicht | der | Mineralien | nach ihren | Krystallographisch-Chemischen Beziehungen.” verso blank.; [iii-iv], Title page, verso “Alle Rechte, ...”; [v]-vi, “Vorwort.”—dated November 1897.; [vii]-viii, “Inhalt.”; [1]-170, Text.; [171]-174, “Anhang.”; [175]-184, “Register.”

SCARCE. Updated to include the species new since the previous edition of 1889. Also the changes among the old species made necessary by recent investigations. Groth also includes the new system of crystallographic nomenclature developed in the author’s *Physikalische Mineralogie* (Leipzig, 1895).

5th edition, 1921: Mineralogische tabellen von P. Groth und K. Mieleitner. München, Berlin, R. Oldenbourg, 1921. 4°: [4], 176 p. The final edition of Groth’s popular tables written with the assistance of Karl Mieleitner [see note below].

Karl Mieleitner. (BORN: Munich, Bavaria, Germany, 31 March 1890; DIED: Munich, Bavaria, Germany, 15 March 1923) *German mineralogist & historian of mineralogy*. Born the son of a shoemaker, Mieleitner became in 1913 assistant for the Bavarian state mineral collection at the University of Munich, where in 1919 he succeeded F. Grünlung as ‘Konservator.’ He was an enthusiastic and energetic worker, producing several papers within a few years. He developed an interest in the history of mineralogy and published before his early death German translations, with authoritative notes, of the old works of Steno, Bartholin and Capperl.

REFERENCES: *American Journal of Science*: 4th Series, 5 (1898), 154-5. • Dana’s 7th (Bibliography): 72. • NUC. • *USGS Library Catalog*. (Mieleitner) *Mineralogical Magazine*: ?? (19??), 266 [by L.J. Spencer]. • Sarjeant, *Geologists*, 1980: 3, ?? • *Zeitschrift der Kristallographie*: 59 (1923), 86-8 [by H. Steinmetz].

2016. — German, 1891.

Führer durch die Mineraliensammlung des Bayerischen Staates im Gebäude der Kgl. Akademie der Wissenschaften (Wilhelminum) in München von Paul Groth. München, Verlag der Akademie der Wissenschaften, 1891.

8°: [1]-331, [1] p.

RARE. In 1872, Franz von Kobell wrote “Die Mineraliensammlung des bayerischen Staates” (see, *Abhandlungen den könig. Bayerische Akademie der Wissenschaften*, 11 (1872), no. 1, 36 p.). Apparently, that was the only description of the collection of the Bavarian State mineral collection until Groth compiled this massive catalog.

Supplement, 1899: Nachtrag zu dem Führer durch die Mineraliensammlung des Bayerischen Staates im Gebäude der Kgl. Akademie der Wissenschaften (Wilhelminum) in München von Paul Groth. München, Verlag der Akademie der Wissenschaften, 1899. 16 p.

REFERENCES: NUC. • *USGS Library Catalog*.

2017. — German, 1921.

Elemente der physikalischen und chemischen Krystallographie. München und Berlin, 1921.

8°: viii, 363 p., 4 colored plates, 962 illus., 25 stereoscopies (in pocket at the front of the book).

RARE. One of Groth's last major crystallographic books the first published after the important discoveries of X-ray analysis of crystals in 1912. Abridged from the text of the author's popular *Physikalische Krystallographie*, this book is fully illustrated. Apparently it is a rare volume, being published during Germany's period of hyperinflation after World War I.

REFERENCES: NUC.

Entwicklungsgeschichte

2018. — German, 1926 [First edition].

Entwicklungsgeschichte | Der Mineralogischen | Wissenschaften | Von | P. Groth | Mit 5 Textfiguren | Berlin | Verlag Von Julius Springer | 1926.

8°: π^3 1-16⁸ 17³; 134 ℓ .; [i]-iv, [2], [1]-261, [1] p., 5 illus., name and subject indexes. PAGE SIZE: 230 x 154 mm.

CONTENTS: [i-ii], Title page, verso "Alle Rechte, Insbesondere Das Der Übersetzung | In Fremde Sprache, Vorbehalten. | Copyright By Julius Springer In Berlin."; [iii]-iv, "Vorwort."—signed P. Groth, April 1926.; [1 pg], "Inhaltsverzeichnis."; [1 pg], "Druckfehler."; [1], "Krystallkunde."; [2], Blank.; [3]-143, Text.; [144], Blank.; [145], "Mineralkunde."; [146], Blank.; [147]-237, Text.; [238], Blank.; [239], "Biographische Notizen | ..."; [240], Blank.; [241]-256, Text.; [257]-259, "Sachregister."; [260]-261, "Nameregister."; [1 pg], "Nachtrage."

RARE. This essay, which develops an historical perspective on the mineralogical sciences as seen from the view point of discoveries in crystallography, is especially interesting having been written by one of the greatest mineralogists. The text is divided into two sections: "Krystallkunde" and "Mineralkunde," with the period covered going to the end of the nineteenth century. The first section contains chapters that cover geometrical and chemical crystallography, as well as the recognition of a connection between the forms of crystals and their optical properties. Information is also given concerning the then recent developments in X-ray crystallography. The mineralogical section has chapters devoted to the crystallography of minerals, the optical determination of the rock-forming minerals, paragenesis and the chemistry of minerals, including the study of their alteration and artificial reproduction. Important regional mineralogies are mentioned, and very short accounts of important national mineral collections are also given. An appendix gives 37 biographical sketches of prominent mineralogists and crystallographers from the past. The work concludes with two short indexes, one of subjects and the other of names. The latter is incomplete with many more names mentioned in the text than appear in the index.

Facsimile reprint, 1978: Entwicklungsgeschichte der

Mineralogischen Wissenschaften von P. Groth. Mit 5 Textfiguren. Berlin Verlag von Julius Springer, 1926.

REFERENCES: *American Journal of Science*: 5th Series, **13** (1927), 273-4 [by W.E. Ford]. • *American Mineralogist*: **12** (1927), 27-8 [by E.H. Kraus]. • Dana's 7th (Bibliography): 72. • *Mineralogical Abstracts*: **3** (1928), 223 [by L.J. Spencer]. • NUC. • *Tschermaks mineralogische und petrographische Mitteilungen*: **36** (1925), 283-4 [by F. Becke].

GRUNER, Louis Emmanuel. (BORN: Bern, Switzerland, 11 May 1809; DIED: Besanc, Switzerland, 26 March 1883) *Swiss chemist & geologist*.

REFERENCES: Poggendorff: **1**, cols. 966 & 1571; **3**, 556.

2019. — French, 1857.

Description | Géologique Et Minéralogique | Du Département De La Loire | Par | M.L. Gruner, | Ingenieur En Chef Au Corps Impérial Des Mines. | [ornament] | Paris. | Imprimerie Impériale. | [short rule] | MDCCLVII.

8°: [4], [i]-xvi, [1]-778, [2] p., one plate, illus., colored map. Includes bibliographical references.

CONTENTS: [2 pgs], Half title page, "Description | Géologique Et Minéralogique | Du Département De La Loire," verso blank.; [2 pgs], Title page, verso blank.; [i]-XVI, "Avant-Propos."; [1]-742, Text.; [743]-778, "Table Des Matières."; [1 pg], "Addition et Changements."; [1 pg], Blank.; [At end], Map.

VERY SCARCE. A topographical description of the geology and mineralogy of the region of Loire in France.

REFERENCES: NUC. • NYPL Catalog.

GUALTIERI, Niccolò. (BORN: Tuscany, Italy, 1688; DIED: Florence, Italy, 25 February 1744) *Italian physician & naturalist*.

Gualtieri was professor of medicine at the University of Pisa and personal physician to Cosimo III, Grand Duke of Tuscany.

REFERENCES: ABI: I 518, 337-340. • *Biographie Universelle*. • *Catalogue of Portraits of Naturalists*: 511 [1 portrait listed]. • *Dizionario Biografico Italiani*. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: **1**, col. 968. • WBI.

2020. — Latin, 1742 [Collection catalog].

[In red:] Index | [in black:] Testarvm | [in red:] Conchyliorvm | [in black:] Qvae Adservantvr In Mvseo | [in red:] Nicolai Gvaltieri | [in black:] Philosophi Et Medici Collegiati Florentini | [in red:] Regiae Botanicae Florentinae Academiae Quae | In Filano Atheaniae Medicinae Provitaliae Emerti | [in black:] In Methodice Distribvtae | Exhibentvs. | [in red:] Tabvllis CX. | [in black, vignette] | [in red:] Florentiae, Anno CIOIOCCXII. | [in black:] Ex Typographia Casetana Albizzini. | [rule] | Praesidium Premissv.

5 parts in one volume. 2°: [i]-xxiii (including frontispiece), [1] p., 126 ℓ ., with engraved frontispiece, portrait, 110 numbered full-page plates, 17 engraved vignettes on the sectional title pages, 18 other vignettes and plates in the text, and 2 capital initials. The title page and sectional titles are printed in red and black.

GUETTARD

Each part and each "classis" of parts 2-4 has a special title page. PAGE SIZE: 462 x 328 mm.

CONTENTS: [Part 1] [i-ii], Title page, verso blank.; [iii-iv], "Engraving by Jo. Dom. Cumpigia del e P. Ant. Passi," verso blank.; [v-vi], Frontispiece, verso blank.; [vii-viii], Portrait of Gualtieri, Maria Madd. Gozzi del, P. Ant. Pazzi fc, verso blank.; VII-VIII, Dedication to Francesco III of Toscana.; IX-XVI, Preface.; XVII-XX, "Introductio ad Historiam Testacorum.," XXI-XXIII, "Totius Indicis Prospectus et ordo.," [1 pg], "Acropora" [=List of plates]; [16 unnumb. pages comprising frontispiece and 8 plates of which 7 are numbered].

[Part 2] [30 unnumb. pages, comprising 13 plates of which 12 are numbered and 3 engraved text leaves].

[Part 3] [116 unnumb. pages, comprising 58 plates of which 51 are numbered 20 to 70].

[Part 4] [76 unnumb. pages, comprising 38 plates of which 34 are numbered 71 to 104].

[Part 5] [14 unnumb. pages, comprising 6 plates numbered 105 to 110].

PLATES: Gualtieri's portrait is engraved after an original painting by J. Menabuoni. All the plates were engraved by P. Antonio Pazzi.

RARE. A beautifully produced book of which only a few special copies were meant to contain the portrait of Gualtieri, which is usually missing. This title is one of the most curious and beautiful conchological works ever printed. The plates depict many of the specimens standing on their apices, and the engraving and typography throughout the work is exceptional. Gualtieri's patron, the Grand Duke of Tuscany, was a keen collector of shells and by many accounts had a magnificent cabinet including 360 species sent to him by RUMPHIUS. Gualtieri apparently was given his choice of any duplicates.

LKG and Ward & Carozzi list this work in their catalogs and it is presumed this title contains some information relevant to mineralogy.

REFERENCES: BL: [460.f.11.]. • Caprotti, *l'Illustrazione Malacologica*, 1991-6: p. 40 [provides a contents listing]. • Caprotti, E., "Per una storia della malacologia dall'eta Barocca al secolo dei lumi," *Boll. Malacologico*, 21 (1985), nos. 7-9, 183-202. [Descriptions of illustrated shell books published during the Baroque period.]. • LKG: XIV 520. • Nissen (ZBI): no. 1736. • NUC: 221, 158 [NG 0561466]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 968.

GUETTARD, Jean Étienne. (BORN: 22 September 1715; DIED: 8 January 1786) *French physician, geologist, botanist & naturalist.*

Guettard was curator of the natural history collection of the French scientist René de Réaumur (1741) and a member of the Faculty of Medicine of Paris (1742). From 1747 to 1752 he was médecin botaniste to the French prince Louis, duc d'Orléans, and later was also supported by Louis son Louis-Philippe. He discovered the volcanic nature of the Auvergne region in France, mapped the mineralogical distributions of much of Europe, and collaborated with the French scientist Antoine Lavoisier on the preparation of a geological survey of France.

REFERENCES: ABF: I 486, 420-446; II 321, 9-10. • Feller, *Biographie Universelle*, 1851. • *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, cols. 973-4. • WBI.

2021. — French, 1774.

Mémoires sur différentes parties de la physique, de l'histoire naturelle, des sciences et des arts par Jean Etienne Guettard. Paris, Chez Costard, 1774.

3 vols. 4°: cxxvi, 439 p. 4°: lxxii, 530 p. 4°: 544 p., [89] pl. VERY RARE.

REFERENCES: BL. • LKG: VI 42. • NUC: [no copy listed].

2022. — French, 1779 [First edition].

Mémoires | sur | la Minéralogie | du | Dauphiné. | [double rule] | Par M. Guettard. | [double rule] | Tome Premier. | [ornament] | A Paris, | De L'Imprimerie de Clousier, | rue Saint-Jacques. | [double rule] | M. DCC. LXXIX.

2 vols. [VOL 1] 2°: [i]-clxxxiii, [1], [1]-138, [2], [1]-198 p. [VOL 2] 2°: [2], [299]-852 p., 19 plates (hand-colored). PAGE SIZE: 275 x 215 mm. uncut. RARE.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii-iv], "A Messieurs Les Dauphinois, ..."; [iv]-clxxxiii, "Preface.," [1 pg], Catch work, "Itinéraire.," [1]-138, "Itinéraire.," [1 pg], "Minéralogie du Dauphiné.," [1 pg], Blank.; [1]-198, "Premier Mémoire, contenant L'Idée Générale de la Minéralogie du Dauphiné."

[Vol 2] [2 pgs], Title page, verso blank.; [199]-824, "Second Partie Du Dauphiné, ou partie calcaire.," [825]-852, "Explication des Plances.," [At end], 19 plates.

PLATES: The 19 plates may be broken down as follows: 1-4, Fossil sponges. 5-8, Fossil shells. 9, Shark teeth. 10, Nautalis. 11-12, Various rocks. 13, Geological cross-section. 19, Concretion. 15-16, Quartz crystal specimens. 17-18, Various mineral specimens. 19, Flowers.

REFERENCES: LKG: XIV 360*.

2023. — French, 1782 [2nd edition].

Seconde Partie. | [rule] | Minéralogie | Du Dauphiné. | Par M. Guettard, de l'Academie Royale | des Sciences, &c.

[GENERAL TITLE PAGE:]

[In red:] Description | [in black:] Générale Et Particulière | [in red:] De La France | [in black:] Quvrage Enrichi D'Estampes | D'Après les Dessins des plus célèbres Artistes. | [rule] | [in red:] Dédié Au Roi. | [in black, rule] | [ornament] | A Paris, | [in red:] De L'Imprimerie De Ph.-D. Pierres, | [in black:] Imprimeur Ordinaire du Roi. | [triple rule] | [in red:] M. DCC. LXXXII. | [in black:] Avec Approbation, et Privilège du Roi.

2°: π^3 A-Z² Aa-Zz² Aaa-Qqq² [plates] Rrr-Sss²; 131ℓ.; [6], [1]-248 p., 20 plates on 10ℓ., [249]-255, [1] p. The 20 fine engravings on 10 leaves all show minerals and fossils drawn by De Fecamp and engraved by J. Robert. The title page has a good woodcut vignette. PAGE SIZE: 497 x 335 mm.

CONTENTS: [2 pgs], Half title page, "Description | De La France. | [rule] | Département Du Rhône. | Gouvernement De Dauphiné," verso "Ce Volume contient.," [2 pgs], Title page, verso blank.; [2 pgs], "Seconde Partie. | [rule] | Minéralogie | Du Dauphiné. | Par M. Guettard, de l'Academie Royale | des Sciences, &c.," [1 pg], Blank.; [1]-248, Text.; [plates]; [249]-255, "Explication | Des Planches.," [1 pg], Blank.

PLATES: This work contains 20 well executed hand-colored plates on 10 leaves all signed Carême De Fecamp del. J. Robert sculp. The plates break down as follows: 1-2, Fossil sponges. 3-4, Various fossils. 5-8, Fossil shells. 9-10, Various fossils. 11-12, Various rocks. 13, Azurite

spheres. 14, Quartz crystals. 15-16, Quartz crystal clusters (magnificent illustrations). 17-18, Calcite. 19-XX, Plants.

RARE. The present work was first published in 1779. It is here part of the large series *Description Générale et Particulière de la France*, with a separately printed title. Guettard wrote a number of works on the geology and mineralogy of France. He is best known for his discovery of the volcanic nature of Auvergne and his attempt to construct a geological map of France.

This is the rare second edition of the first book on fossils and minerals of the province Dauphine in France published within the "Description de la France, département du Rhone, gouvernement de Dauphine, in 3 parts in one, including also XXIV, 102p.: Abrege de l'Histoire du Dauphine et des Princes Dauphins with a nice engraved text vignette showing the "Price des possessions du Dauphine en 1349" and the third part: Idee generale de ce gouvernement suivant ses principales divisions géographiques, physiques, économiques, ses productions, agriculture, commerce, manufactures, with 240p. and its own titlepage published in 1784. By far the most important part is the mineralogical one authored by Guettard. This later edition seems to have less pages although it's printed in 2 columns but has 20 plates instead of 19 and may be this is a revised and enlarged edition.

Facsimile reprint, 1999: *Minéralogie du Dauphiné*. Paris 1782. 4°: xiii, 255 p., 20 color plates. [This limited edition reprint also includes the "note de l'éditeur", an essay on the author and "histoire géologique du Dauphiné" with a map by W. Fischer.]

REFERENCES: LKG: XIV 360*. • Ward & Carozzi, *Geology Emerging*, 1984: no. 977.

2024. — French, 1775.

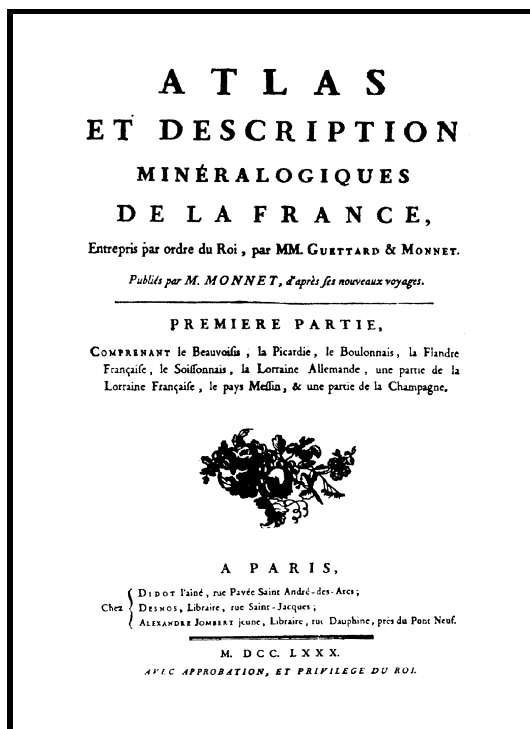
Atlas mineralogique de France, ou connaissance géographique des différentes substances minérales et crops fossiles, que ce royaume renferme, entrepris par les ordres de M. Bertin, dressé d'après le plan, les voyages, les mémoires de M. Guettard, exécuté en totalité par M. Dupain-Triel. Paris, 1775.

2°: With a map. **RARE.**

REFERENCES: Duveen, D.I. & H.S. Klickstein, "A bibliographical study of the introduction of Lavoisier's *Traité Élémentaire de Chimie* into Great Britain and America," *Annals of Science*, 10 (1951), 321-338: 218 & suppl., pp. 129-32. • *Freilich Sale Catalog*: no. 334. • LKG: XIV 335. • Norman Catalog: 1, no. 1287. • Norman Sale Catalog: no. 602.

2025. — French, 1780.

Atlas | Et Description | Minéralogiques | De La France, | Entrepris par ordre du Roi, par MM. Guettard & Monnet. | Publiés par M. Monnet, d'après ses nouveaux voyages. | [rule] | Première Partie, | Comprenant le Beauvoisis, la Picardie, le Boulonnais, la Flandre | Française, le Soissonnais, la Lorraine Allemande, une partie de la | Lorraine Française, le pays Messin, & une partie de la Champagne. | [ornament] | A Paris, | Chez [the next 3 lines braced on the left by a "{" :] Didot



ATLAS ET DESCRIPTION MINÉRALOGIQUES, 1780

l'ainé, rue Pavée Saint André-des-Arcs; | Desnos, Libraire, rue Saint-Jacques; | Alexandre Jombart jeune, Libraire, rue Dauphine, près du Pont Neuf. | [double rule] | M. DCC. LXXX. | Avec Approbation, Et Privilege Du Roi.

2°: xii, 212 p., 32 folding plates, illus., maps. PAGE SIZE: 420 x 600 mm.

RARE. No more published. Guettard had been officially commissioned to prepare an atlas of the mineralogical wealth of France and in 1767 was authorized to begin his work and visit Alsace and Lorraine in order to collect the data for that region. He invited a young ANTOINE LAVOISIER to accompany him. Unfortunately political intrigue and funding issues were to prevent the completion of the publication of the atlas.

The first part was published under the joint authorship of Guettard and ANTOINE GRIMOALD MONNET although Lavoisier did much of the preparatory work. He had not only taken the field notes during his 1767 trip with Guettard, but he also collated and arranged the mass of collected information, and prepared most of the detail work of the geological maps. By 1770 he had supervised the engraving of 16 plates for the expected series of 230 maps for the whole of France. Lavoisier also invented the feature of showing on the maps the heights of geological strata. But Monnet who added 16 plates and a long text did not credit Lavoisier, although the latter angered by the treatment protested bitterly. Monnet published the whole as a first part

GUGLIELMINI

of the *Atlas*, but unfortunately no further installments ever appeared.

REFERENCES: BL: [459.a.20.]. • Duveen, D.I. & H.S. Klickstein, "A bibliographical study of the introduction of Lavoisier's *Traité Élémentaire de Chimie* into Great Britain and America," *Annals of Science*, **10** (1951), 321-338: suppl., pp. 129-32. • *Freilich Sale Catalog*: no. 335 [Complete listing of maps]. • LKG: XIV 336b* & 360*.



GUGLIELMINI

GUGLIELMINI, Domenico. (BORN: Bologna, Italy, 27 August 1655; DIED: Padua, Italy, 12 June 1710) *Italian physician & hydraulic expert.*

At the University of Bologna, Guglielmini studied mathematics under Geminiano Montanario [1633–1687] and medicine with Marcello Malpighi [1628–1694]. In 1678, he graduated with his medical degree, and soon thereafter became associated with the city's famous Museum of Aldrovandi. In 1686, he accepted a position with the water works of the Bologna state. In this post, Guglielmini began a lifelong study of fluid mechanics and hydrology, on which he wrote several books that are considered among the first scientific works on the subject. He returned to Bologna in 1690 as professor of mathematics at the city's University. He accepted a professorship in mathematics at Padua in 1698, where in 1702 he was also named a professor of medicine. He died there after a long illness in his 55th year.

REFERENCES: ABI: I 523, 195-226. • Aloisi, P., "Domenico Guglielmini e la cristallografia," *Periodico di Mineralogia*, Roma, **8** (1937), 163-75. • Casati, *Dizionario degli Scrittori d'Italia*, 1925-34. • *Catalogue of Portraits of Naturalists*: 513 [1 portrait listed]. • Colonne, F.-J.-M., *Dominique Guglielmini (1655-1710)*. Paris, Jouve, 1929. 42 p., frontispiece (portrait) and bibliography. *Thesis. Université de Paris, Faculté de Médecine.* • Guareschi, I., "La storia delle scienze e Domenico Guglielmini," *Atti della Società Italiana per il Progresso delle Scienze, VI Riunione*, 1913, 39 p. [published, Roma, 1914]. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Mazzetti, *Repertorio di Tutti i Professori*, 1848. • *Mémoires de l'Académie Royale des Sciences*: 1710, 152-66. • Mieleitner, Karl., "Die Anfänge der Theorien über die Struktur der Kristalle. Domenico Guglielminis *Philosophische Betrachtungen, abgeleitet von den Formen der Salze*," *Fortschritte der Mineralogie*, **8** (1923), 55-90. • Morgagni, J.B., "[Vitæ Dominici Gulielmini]," in: Guglielmini, D., *Opera Omnia*. Geneva, 1719. • Poggendorff: **1**, col. 974. • Sarjeant, *Geologists*, 1980: **2**, 1158. • WBI.

RIFLESSIONI FILOSOFICHE

Dedotte dalle Figure de' Sali

DAL DOTTORE

DOMENICO GUGLIELMINI

ESPRESSE IN VN DISCORSO

Recitato nell'Accademia Filosofica Esperimentale
DI MONSIEG. ARCIDIACONO MARSIGLI

La sera delli 21. Marzo 1688.

All' Illustriss. & Eccellentiss. Sig.

D. MARC' ANTONIO
BORGHESE.



IN BOLOGNA, M. DC. LXXXIIX.

Per gli Eredi d'Antonio Pisarri. Con licenza de' Superiori.

RIFLESSIONI FILOSOFICHE, 1688

2026. — Italian, 1688 [First edition].

Riflessioni | Filosofiche | Dedotte dalle Figure de' Sali | Dal Dottore | Domenico Gvghielmini | Espresse In Vn Discorso | Recitato nell' Accademia Filosofica Esperimentale | Di Monsig. Arcidiacono Marsigli | La sera delli 21. Marzo 1688. | All' Illustriss. & Eccellentiss. Sig. | D. Marc' Antonio | Borghese. | [ornament] | In Bologna, M. DC. LXXXIIX. | [rule] | Per gli Eredi d'Antonio Pisarri. Con licenza de' Superiors.

4°: π^2 A-E⁴; 22ℓ.; [4], 1-39, [1] p., one plate (folding; illustrating crystal structure). PAGE SIZE: 220 x 160 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Deidication, beginning: "Illvstrissimo, | & Eccellentissimo Signore."—signed Domenico Guglielmini, 25 August 1688.; 1-33, Text.; 34-37, "Dimostrazione della propozione accennata | nel Discorso a carte 22. in ordine al po- | tersi comporre le Piramidi grandi di altre | ..." ; 38-39, "Lemma Primo. | ..."; [1 pg], "Vid. D. Fulgentius Orighettus Cler. Reg. | S. Pauli & ..."; [At end], One folding plate.

EXTREMELY RARE. An important contribution to the development of crystallography, *Riflessioni Filosofiche* is among the first publications to scientifically treat the internal structure of crystals. The author entered into the study on the evening of March 21, 1688 at the *Accademia Filosofica Esperimentale* (Academy of Philosophical Experimenting) of Count Luigi Ferdinando Marsigli in Bologna. At this particular meeting, Guglielmini demonstrated several experiments in the

precipitation of crystals from various saline solutions. Careful study of the resulting specimens led Guglielmini to conclude that only four primary crystal shapes existed, and that all other geometries observed arose from various internal combinations of these four basic shapes and their associated salt. The four salts that possessed these forms were common salt (the cube), salt of vitriol (the rhombohedron), niter (the hexagonal prism), and alum (the octahedron). The author further hypothesized that although endowed with unalterable shapes, these four base types were built from collections of very small, unseeable pieces of the named salt. Even though the concepts rely upon seventeenth century doctrine, Guglielmini's studies into the nature of crystals was a significant advance in the emerging science of crystallography. Apparently printed in a small edition, this is a very rare book, with no copies recorded in NUC or the *British Library Catalog*.

REFERENCES: Aloisi, P., "Domenico Guglielmini e la cristallografia," *Periodico di Mineralogia*, Roma, 8 (1937), 163-75: 8 (1937), 163-75. • BL. • Burke, *Origins of the Science of Crystals*, 1966: 24-5. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 68. • Kobell, *Geschichte der Mineralogie*, 1864: 19-22. • Lima-de-Faria, *Historical Atlas of Crystallography*, 1990: 2, 3, 6, 7, 8, 9, 22, 23, 35, 42, 44, 45, 57, 125, & 128. • LKG: IX 1*. • Metzger, *Genèse de la Science des Cristaux*, 1918: 166. • Mieleitner, Karl., "Die Anfänge der Theorien über die Struktur der Kristalle. Domenico Guglielminis *Philosophische Betrachtungen, abgeleitet von den Formen der Salze*," *Fortschritte der Mineralogie*, 8 (1923), 55-90: 8 (1923), 55-90 [provides a German translation]. • NUC: [no copy listed]. • Partington, *History of Chemistry*, 1961-70: 2, 450. • Personal communication: [Renato and Adriana Pagano]. • Riccardi, *Biblioteca Mathematica Italiana*, 1893: 1, 641-2 ["Questa dissertazione ... interessa assai la storia delle scienze fisico-mathematiche, perchè primo in essa l'a. espone le basi fondamentali della moderna cristallografia."].

2027. 2nd edition, 1706: Riflessioni | Filosofiche | Dedotte dalle Figure de' Sali | Dal Signor | Domenico Guglielmini | Filosofo E Medico Bolognese | E nello Studio di Padova Professore | Primario di Medicina Teorica | Già espresse in un Discorso Recitato nell' Accademia | Filosofica esperimentale di Monsig | Archidiacono Marsigli. | [ornament] | In Padova, Per la Ved. Frambotti. M.DCC.VI. | [rule] | Con Licenza De' Superiori.

4^o: A-D⁴ E⁶; 22^l.; [1]-43, [1] p., one plate (folding; illustrating crystal structure). PAGE SIZE: 188 x 132 mm.

CONTENTS: [1-2], Title page, verso blank.; 3-40, Text.; 41-43, "Corolario."; [1 pg], Blank.

RARE. In this edition, the dedication to Prince Borghese has been omitted.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 68. • LKG: IX 1*.

2028. Latin transl., 1719: Dominici | Gulielmini [sic] | Medicinæ Doctoris Bononiensis | In Patrio Archigymnasio | Scientiarum Mathematicarum Primarii Professoris, Et Aquarum Bononiensium Superintendentis. | Opera Omnia | Mathematica, Hydraulica, Medica, Et Physica. | Acceßit | Vita Autoris, A Jo. Baptista Morgagni | Med. Doct. & Profess. Patavino Scripta. | Cum Figuris & Indicibus Necessariis. | Tomus Primus [-Secundus] | [ornament] | Genevæ | Sumptibus Cramer, Perachon & Socii. | [rule] | M. DCCXIX.

2 vols. [VOL 1] 4^o: [16], 772 p., frontispiece (portrait of Guglielmini), illus. Title page in red and black. [VOL 2] 4^o: [4], 571 p. PAGE SIZE: 200 x 250 mm.

PLATES: The fine, engraved frontispiece portrait shows Guglielmini's head and upper torso inside an oval frame. Within the frame border is the wording, "Dn. D. Dominicus

RIFLESSIONI
FILOSOFICHE
Dedotte dalle Figure de' Sali
DAL SIGNOR
DOMENICO
GUGLIELMINI

FILOSOFO E MEDICO BOLOGNESE
E nello Studio di Padova Professore
Primario di Medicina Teorica
Già espresse in un Discorso Recitato nell' Accademia
Filosofica esperimentale di Monsignor
ARCHIDIACONO MARSIGLI.



IN PADOVA, Per la Ved. Frambotti. M.DCC.VI.
CON LICENZA DE' SUPERIORI.

RIFLESSIONI FILOSOFICHE, 1706

Guglielminius [sic] • Bononiensis. In Patav. Gymnas. Theoric. Medicin. Profes. Publ. Primap. Denat. A^o. MDCCX Æt. LIV." At the bottom corners of the frame are two ornaments. The one on the left shows a medical staff motif and the one on the right pictures an astrolabe. The signature at the base could not be read.

SCARCE. Translated by H. Fiot from *Riflessioni Filosofiche* (1st ed., Bologna, 1688). According to Mieleitner (1923), there is a Latin translation of the *Riflessioni Filosofiche* contained within the work (see: 1, 65-104). He does not consider this to be a good rendering of the work, either. This collected edition also contains a fine engraved portrait as well as a long biography of Guglielmini by John Baptista Morgagni.

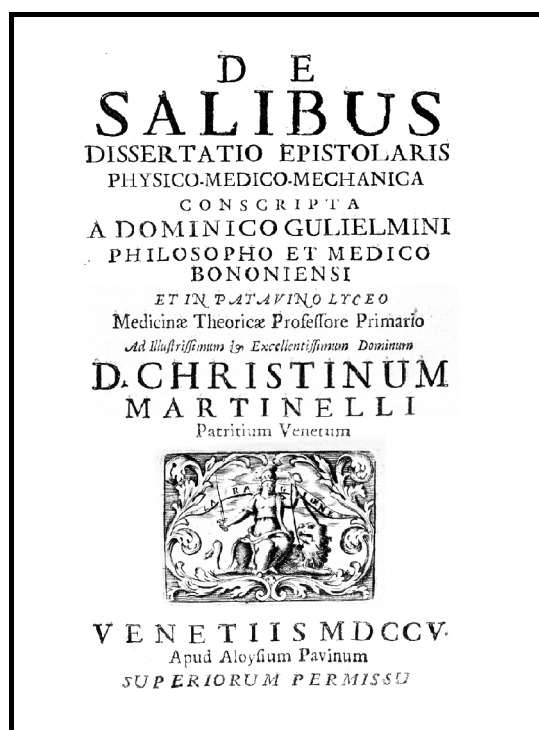
Giovanni Baptista Morgagni. (BORN: Forlì, Italy, 25 February 1682; DIED: Forlì, Italy, 5 December 1771) *Italian physician*.

[BIOGRAPHY NEEDED]

REFERENCES: BL: [47.d.15.16.]. • *Freilich Sale Catalog*: no. 218. • Riccardi, *Biblioteca Mathematica Italiana*, 1893: 1, 644. • Roller & Goodman, *Catalogue*, 1976: 1, 492. (Morgagni) ABI: I 678, 63-145; II S 57, 77. • Capparoni, *Profili Bio-Bibliografici*, 1928-32: 1, 106-8, portrait. • De Tipaldo, *Biografia degli Italiani*, 1834-45. • Jarcho, S., "The Correspondence of Morgagni and Lancisi on the Death of Cleopatra," *Bulletin of the History of Medicine*, 43 (1969), no. 4, 299-325, illus. • WBI.

2029. — Latin, 1705 [Dissertation].

De | Salibus | Dissertatio Epistolaris | Physico-Medico-Mechanica | Conscripta | A Dominico Gulielmini | Philosopho Et Medico | Bononiensi | Et In Patavino Lyceo | Medicinæ



DE SALIBUS, 1705

Theoricæ Professore Primario | Ad Illustrissimum & Excellentissimum Dominum | D. Christinum | Martinelli | Patritium Venetum | [ornament] | Venetiis MDCCV. | Apud Aloysium Pavinum | Superiorum Permissu.

8°: [16], 280 p.

RARE. An important and widely unknown work in the history of crystallography that continues the author's researches into the crystallization of various salts.

Reissued, 1707: Leyde, Fredericum Haaring, 1707. 8°: [16], 280 p.

REFERENCES: BL: [953.c.1.(1.)]. • Riccardi, *Biblioteca Mathematica Italiana*, 1893: 1, 641.

GUIDIUS, Giovanni. *Italian lawyer & naturalist.*

REFERENCES: ABI: I 525, 173-174. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.

2030. — Latin, 1625 [First edition].

[In black:] De | [in red:] Mineralibus | [in black:] Tractatus in Genere | [in red:] Ioannis Gvidii Senioris | Patritij Volaterrani I.C. ætate sua celeberrimi, | [in black:] Libri Quatuor; | [The following text is in two columns separated by a vertical bar printed in red:] In quorum | I. agitur [With a brace on the right printed in red grouping the three lines:] De Metallarijs. | De Artificibus Metallorum. | De Alchymistis. | In II. [With a brace on the right printed in red grouping the five lines:] De Metallis. |



DE MINERALIBUS TRACTATUS, 1625

De Auro, & Argento. | De Gemmis. | De Ferro, & Armis. | De Salinis. | [Vertical bar printed in red separating the two text columns] | In III. | [With a brace on the right printed in red grouping the five lines:] De Moneta. | De Thesauris. | De rebus aureis, & argenteis. | De Ornamentis. | De Vestibus Auratis. | In IIII. | [With a brace on the right printed in red grouping the two lines:] De Publica Vtilitate. | De Priuata Vtilitate. | [in red:] Opus diù desideratum, à præclarissimis I.C. summis laudibus insignitum, nunc | tandem temporis prima vice præio diligenter submissum, & in lucem editum. | [in black:] Cum duobus Indicibus, vnus Titulorum, alter Rerum notabilium. | [in red:] Superiorvm Per Missv, Et Privilegio. | [in black:] [rectangular printer's device] | Venetiis, M DC XX V. | [in red:] [rule] | [in black:] Apud Thomam Ballionum.

8°: †⁴ a-b⁸ A-M⁸ N³; [119ℓ.]; [40], 1-208 p. Title in red and black. PAGE SIZE: 224 x 160 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], Dedication to Ferdinando Secvndo.; [3 pgs], "Typographys | Benevolo | Lectori."; [2 pgs], "Index | Titvlorum | Qvæ in hoc mineralivm | Tractatu continentur."; [30 pgs], "Index | Rerum Notabilivm, | Qvæ in hoc Mineralivm | Tractatu continentur."; 1-208, Text.

RARE. First edition of this treatise on minerals, metals, gems and gemstones. "That mineralogy had made little advance during the previous hundred years might be inferred from the fact that Giovanni Guidi

of Volterra in 1725 dedicated to Ferdinand II, and published at Venice a treatise *De Mineralibus* by one of his ancestors who lived from 1464 to 1530, and there was another printing of the book in 1627" (Duveen). This is not however a justified position, since the volume is principally concerned with legal questions concerning alchemists, gems and the like. Guidi also includes his own commentary and includes much information on the working practices of silver- and goldsmiths, gem merchants, cutters and polishers, etc. "The section on gems referred to by Thorndike appears on pages 64-73, and as in the other portions of the work, consists of a series of questions raised by Guidi and answered by quotations or statements taken from other authorities, among them Pliny, Isidore of Seville, the Bible, etc. The questions on gems are general and jump from topic to topic with little solid information divulged. Questions on pearls are included. More on gems appears in the section entitled "De Ornamentis," pp. 174-80" (Sinkankas). The *British Library Catalogue* claims that although the volume was authored by Joannes the Elder, it was edited and published by Joannes the Younger.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 273. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 354. • Hoover Collection: no. 378. • LKG: III 43a. • NUC: Suppl. ??, ??. • Roller & Goodman, *Catalogue*, 1976: 1, 492. • Sinkankas, *Gemology Bibliography*, 1993: no. 2608. • Thorndike, *History of Magic*, 1923-58: 7, 252. • Wellcome Catalog (Books): 1, no. 2985.

2031. 2nd edition, 1627: Joannis Gvidii, | Volaterrani Ic. | De | Mineralibus | Tractatus Abso- | lvtissimus: | In Libros quatuor diuisus. | [Two columns of text separated by a vertical bar:] In quorum | I. agitur [Bracing on the right the three lines of text:] De Metallariis. | De Artificibus Metallorum. | De Alchimis. | In II. [Bracing on the right the five lines of text:] De Metallis. | De Auro, & Argento. | De Gemmis. | De Ferro, & Armis. | De Salinis. | [Vertical bar separating columns.] | In III. [Bracing on the right the five lines of text:] De Moneta. | De Thesauris. | De rebus aureis, & argenteis. | De Ornamentis. | De Vestibus auratis. | In IV. [Bracing on the right the two lines of text:] De Publica vtilitate. | De Priuata vtilitate. [End of columns.] | Opus diu desideratum, à præclarissimis JC. summis laudibus insignitum, | nunc tandem temporis prima vice prælo diligenter submissum, & in lu- | cem editum. | Cum duobus Indicibus, quorum vnus Titulorum, alter Rerum notabilium. | [ornament] | Francofurti | Apud Egenolphum Emmelivm. | [rule] | M. DC. XXVII.

4°:)(4 A-Z4 2A-2D4 2E3; 115ℓ.; [8], 1-[202], [20] p. PAGE SIZE: 200 x 146 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], Dedication to Ferdinando Secvndo, dated 4 July 1625.; [2 pgs], "Typographvs Benevo- | lo Lectori."; [1 pg], "Index | Titvlorum, Qvi In Hoc | Mineralium Tractatu continentur."; 1-[202], Text.; [20 pgs], "Index | Rerum Notabilium, Qvæ In Hoc Mineralium Tractatu continentur."

RARE. Essentially a resetting of the text of the 1625 first edition. The index has been moved to the end of the volume. Pirated edition?

REFERENCES: LKG: III 43a.

GUILD, Frank Nelson. (BORN: Jaffrey, New Hampshire, USA, 28 December 1870; DIED: Tucson, Arizona, USA, 12 March 1939) *American educator, geologist, chemist & mineralogist.*

Son of a clergyman, Guild attended the University of Vermont, graduating with a B.A. in 1894 and his masters in 1903. He later studied in Chicago, Paris and Heidelberg under Goldschmidt, but it was Stanford University that conferred on him a Ph.D. in 1917. He came to the faculty of the University of Arizona in 1897 as professor of chemistry and mineralogy, remaining throughout his career except those periods when he studied abroad or at Stanford. He maintained contact with all the best known mineralogists of Germany, France, England and Sweden until his death. Guild was a recognized authority in optical mineralogy, a study he continued after his retirement in 1934. However, his investigations of the paragenesis of silver minerals are the subject most prevalent in his published writings. Over more than thirty years he trained numerous students in mining and allied industries. By presidential appointment he served several times on the United States assay commission.

REFERENCES: ABA: II 238, 334. • American Men of Science, 6th edition (1938). • *Mineralogical Magazine*: 28(199), 196. • Sarjeant, *Geologists*, 1980: 2, 1159. • WBI.

2032. — English, 1910.

The Mineralogy of Arizona | by | F.N. Guild | Professor of Chemistry and Mineralogy, University of Arizona | [rule] | Easton, P.A. | The Chemical Publishing Co. | 1910 | [rule] | London, England: | Williams & Norgate | 14 Henrietta Street, Covent Garden, W.D.

8°: [1]-103, [1] blank, [4] publisher's list p., 2 figures including one plate (p. 39).one. PAGE SIZE: 162 x 116 mm.

CONTENTS: [1-2], Title page, verso "Copyright, 1910, by Edward Hart."; [3], "Introduction."; [4], "Classification and order of Treatment."; [5]-99, Text.; [100], Blank.; [101]-103, "Index."; [1 pg], Blank.; [4 pgs], "Scientific Books | published by | The Chemical Publishing Co. | Easton, Pa.

VERY SCARCE. Mineralogy – topographical – USA – Arizona. "... The object of this publication, ... is to give a fairly complete description of Arizona's minerals with some reference to their mode of occurrence, associations and chemical composition. The order of treatment is in accordance with the well known classification of Dana." — *Introduction*.

REFERENCES: *American Journal of Science*: 4th Series, 31 (1911), 463-4.

2033. Dissertation, 1917: A Microscopic Study of the Silver Ores | and Their Associated Minerals | A Dissertation | Submitted to the Department of Geology | and Mining and to the Committee on Graduate Study | of the Leland Stanford Junior University | inPartial Fulfilment of the Requirements for | the Degree of Doctor of Philosophy | by | F.N. Guild | [Reprinted from Economic Geology, Vol. XII, No. 4, June, 1917.] | Press of | The New Era Printing Company | Lancaster, PA. | 1917.

4°: [2], 297-353, [1] blank p., plates X-XXI.one. PAGE SIZE: 236 x 175 mm.

CONTENTS: [2 pgs], Title page, verso "Press of | The New Era Printing Company | Lanaster, Pa."; 297, Table of contents.; 298-340, Text.; [341], Blank. 342, "Explanation of Plate X."; [Plate X, verso plate XI]; 343, "Explanation of Plate XI."; 344, "Explanation of Plate XII."; [Plate XII, verso plate XIII]; 345, "Explanation of Plate XIII."; 346, "Explanation of Plate XIV."; [Plate XIV, verso plate XV]; 347, "Explanation of Plate XV."; 348, "Explanation of Plate XVI."; [Plate XVI, verso plate XVII]; 349, "Explanation of Plate XVII."; 350, "Explanation of Plate XVIII."; [Plate XVIII, verso plate XIX]; 341, "Explanation of Plate XIX."; 352, "Explanation of Plate XX."; [Plate

GURNEY

XX, verso plate XXI]; 353, "Explanation of Plate XXI."; [1 pg], Blank.

VERY SCARCE. Describes the paragenesis of various silver minerals. All the plates show various microscopic views of silver containing ores.



DAS MINERALREICH, 1896

GÜRICH, Georg Julius Ernst. (BORN: 1859; DIED: 1938) *German mineralogist.*

2034. — German, 1896 [First edition].

[In black:] Das | [in red:] Mineralreich. | [in black:] Von | Dr. Georg Gürich, | Privatdozent an der Universität zu Breslau. | [rule] | [in red:] 521 Abbildungen im Text. 8 Tafeln und Beilagen in Schwarz- und Farbendruck. | [in black, ornate rule] | Neudamm. | Verlag von J. Neumann.

8°: [6], [1]-754, [8] p., 521 illus., 8 plates (part colored, one double), portraits, maps (one folding), tables (one folding), diagrams. Published as [Hausschatz des Wissens, Abteilung 6. PAGE SIZE: 232 x 154 mm.

CONTENTS: [1 pg], Half title page, "Hausschatz des Wissens. | Das Mineralreich."; [1 pg], Series title page, "Hausschatz des Wissens. | [ornate rule] | Abteilung IV (Band 6). | Das Mineralreich | von | Dr. Georg Gürich | [ornament] | Neudamm. | Verlag von J. Neumann."; [2 pgs], Title page, verso "Recht der Übersetzung vorbehalten."; [1 pg], "Inhalts-Verzeichnis."; [1 pg], Blank.; [1]-739, Text.; [740], "Druckfehler."; [741]-754, "Register."; [8 pgs], Advertisements.

RARE. This is a richly and elaborately illustrated work on economic mineralogy, petrology, and related

topics. Published as the sixth part of a general series the publisher spared little expense in the production of this book. The original binding is an ornately decorated cloth, highlighted in gold, while the title pages are expertly printed in red and black ink. Through out the text, numerous illustrations depict descriptions in the text, and are additionally enhanced with the inclusion of eight plates (two chromolithographs) showing mining scenes, crystals, precious stones, mineral specimens, etc. The introduction (pp. 1-147) covers the basics of mineralogy, including definitions, crystal forms, instrumentation, physical and chemical properties, etc., and is based on the work of Groth, Schrauf, Doelter and Bauer. Precious stones and semi-precious stones are then described (pp. 148-301). Quarried stones, such as marble and granite are discussed (pp. 302-458), followed by various metallic ores (pp. 459-615). The economics and occurrences of coal are treated (pp. 616-697), as are salt (pp. 698-740). Comprehensive name and subject indexes close the work. Eight pages of advertisements are unusual in that they are printed in red and black!

REFERENCES: NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 2626. • *USGS Library Catalog*.

GURNEY, Goldsworthy, Sir. (BORN: Treator, near Padstow, Cornwall, England, 14 February 1793; DIED: Reeds, near Bude, Cornwall, England, 28 February 1875) *English physician & inventor.*

In 1820 Gurney settled as a surgeon in Wadebridge, spending his leisure time in the study of chemistry. He succeeded Dr. Thomson in the lectureship of the Surrey Institution. Gurney invented steam carriages were the first self propelled road vehicles employed to carry passengers. They were used them to run a service from Gloucester to Cheltenham.

REFERENCES: BBA: I 494, 164-167. • *Biographical Dictionary of the History of Technology*: p. 312-3. • Boase, *Modern English Biography*, 1892-1921. • DNB: 8, 801. • Harris, T.R., *Sir Goldsworthy Gurney, 1793-1875*. Truro, Cornwall, Trevithick Society, Federation of Old Cornwall Societies, 1975. 100 p., illus., one table. [Occasional publications of the Trevithick Society, no.2]. • Porter, Dale H., *The life and times of Sir Goldsworthy Gurney: gentleman scientist and inventor, 1793-1875*. Bethlehem, Lehigh University Press, c1998. 285 p., illus., maps. • WBI.

2035. — English, 1823.

A | Course Of Lectures | On | Chemical Science, | As | Delivered | At | The Surrey Institution. | [tapered rule] | By Goldsworthy Gurney. | [double rule] | London: | G. and W.B. Whittaker | Ave-Maria Lane. | [short rule] | 1823.

8°: A⁴ B-U⁸ X⁴; 160ℓ.; [i]-v, [3], [1]-310, [2] p., 8 plates.

CONTENTS: [i-ii], Title page, verso "London: | Printed by Cox and Baylis, Great Queen Street."; [iii]-v, "Preface."; [1 pg], Blank.; [1 pg], "Contents."; [1 pg], "Directions to the Binder."; [1]-270, Text.; [271], "Note regarding the addition of a lecture on the new oxy-hydrogen blowpipe."; 272-310, "Lecture XIII. Blowpipe."; [2 pgs], Works recently published.

RARE. **REWORK COMMENTARY:** The Surrey Institution, Blackfriars, founded in 1808, was, after the Royal Institution and London Institution, the third establishment in London aimed at fostering

and disseminating scientific, technical, and literary knowledge and understanding among a wider public. The Institution offered its proprietors and subscribers the use of an extensive reference library and reading rooms and, most importantly, the opportunity to attend courses of lectures on scientific, technological, and other subjects. Though popular in approach, the lectures conformed to high educational standards and were delivered by recognized authorities in their fields. In the Surrey Institution's celebrated auditorium, the 'Rotunda', there appeared over the years such notable scientists as Accum, Thomson, and Gurney on chemistry, Millington, Mason Good, and Woodward on natural philosophy, Bakewell on geology, and Shaw on natural history; literature was brilliantly represented by Coleridge and Hazlitt. During its relatively brief life-span (1808-23)-cut short by financial stringencies-the Surrey Institution provided access to scientific knowledge and thinking to a wide and appreciative audience. As a meeting place of scientists and men of business with mercantile and manufacturing interests, it performed an important function in cross-fertilizing and reinforcing ideas on innovation and enterprise against the background of the ongoing Industrial Revolution.

Gurney's course of chemical lectures was attended amongst others by Michael Faraday. While at the Surrey Institution he made his first invention, a oxyhydrogen blowpipe. He appended at the end of his course text an extensive description of this instrument together with 3 illustrative plates. For this invention he was the recipient of the Gold Medal of the Society of Arts.

REFERENCES: BL: [1035.k.27.]. • Cole, *Chemical Literature*, 1988: no. 560. • Harris, T.R., *Sir Goldsworthy Gurney, 1793-1875*. Truro, Cornwall, Trevithick Society, Federation of Old Cornwall Societies, 1975. 100 p., illus., one table. [Occasional publications of the Trevithick Society, no.2]: [pp. 15-20]. • Kurzer, Frederick., "A history of the Surrey Institution", *Annals of Science*, **57** (2000), no. 2, 109-41. • Roller & Goodman, *Catalogue*, 1976: **1**, 494. • Wellcome Catalog (Books): **3**, 181.

GÜSSMANN, Franz. (BORN: Wolkersdorf, Austria, 30 September 1741; DIED: Seitenstetten, Austria, 28 January 1806) *Austrian theologian*.

Güssman was a Jesuit, who after the dissolution of the order in 1773, became professor of physics first at the University of Lemberg, then at the Theresianum in Vienna. He retired to the Benedictine compound in Seitenstetten.

REFERENCES: DBA: I 437, 145-151; II 494, 275-276. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: **1**, col. 972-3. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

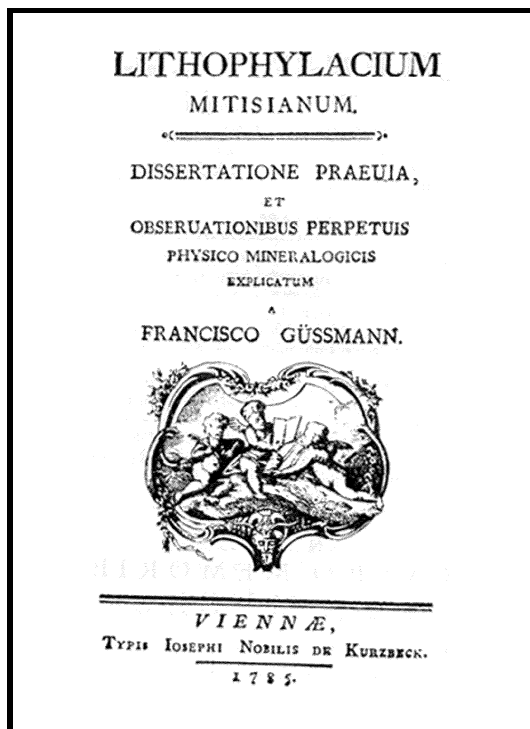
2036. — German, 1782-3.

Beyträge | zur | Bestimmung des Alters | unserer | Erde, | und ihrer Bewohner | der Menschen. | [double rule] | Von | Franz Güßmann, | kais. kön. öffentlichen Lehrer der Naturkunde in Lemberg. | [double rule] | [rule] | Erster [-Zweyter] Theil. | [double rule] | Wien, | gedruckt und verlegt bey Joseph Gerold, | k.k. Reichs=Hofbuchdr. und Univ. Buchhändlern. | [rule] | 1782 [-1783].

2 vols. [VOL 1: 1782] 8°: 268 p. [VOL 2: 1783] 8°: 472 p.

RARE. This work describes and discusses various ideas on the geological age of the earth as well as theories on the origin of the human species.

REFERENCES: BL: [725.f.13.]. • LKG: XIII 151.



LITHOPHYLACIUM MITISIANUM, 1785

2037. — Latin, 1785 [Collection catalog].

Lithophylacium | Mitisianum. | [ornate rule] | Dissertatione Praeuia, | Et | Obseruationibus Perpetuis | Physico Mineralogicis | Explicatum | A | Francisco Güssmann. | [ornament] | [double rule] | Viennæ, | Typis Iosephi Nobilis de Kurzbeck. | [rule] | 1785.

2 parts bound in one volume. [Part 1] 8°: π^1 A-K⁸ L⁹; 90 ℓ .; [2], [1]-177, [1] p. [Part 2] 8°: A-Z⁸ Aa-Qq⁸ Rr⁸ (7; 320 ℓ .; [4], [1]-632, [4] p., one folding plate (15 figures). Errors in signatures and pagination. Engraved title vignette.

VERY RARE. Catalog of the mineral and fossil collection of Ferdinand Georg Edler von Mitis [see note below], President of the Austrian Royal Imperial Hofkammer. Included are descriptions of dendrites, corals and fossil plants. Under the category of "native irons" Gussmann describes the large Krasnojarsk meteorite in detail and provides various theories as to its origin. He concludes that it had fallen from the sky, making this one of his most important works for historians of mineralogy and meteoritics.

HABERLE

Ferdinand Georg Edler von Mitis. (BORN: ; DIED:) *Austrian.* President of the Austrian Royal Imperial Hofkammer numismatic and mining related collections. He also owned his own mineral collection.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 76, no. 2, 449. • BL: [741.bb.6.]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 267. • LKG: XV 38. • Partsch, *Katalog der Bibliothek*, 1851: no. 467. • Wilson, *History of Mineral Collecting*, 1994: 184 & 218. (Mitis) Wilson, *History of Mineral Collecting*, 1994: 184.

2038. — German, 1803.

Über Die | Steinregen | An Den | Jungen Grafen | Eugen Wr̄bna. | [ornate rule] | Von Franz Güssmann. | Eine Physische Abhandlung. | [ornament] | [ornate rule] | Wien, | Gedruckt Bey Johann Thomas Edlen Von Trattner. | K.K. Hofbuchdrucker Und Buhhändler. | 1803.

8°: [1]-50 p., illus.

VERY RARE. In a previous treatise, *Lithophylacium Mitisianum*, Güssmann under the heading of 'native iron' described the large Krasnojarsk meteorite in some detail and various theories as to its origin. It was probable, Güssmann concluded that it had fallen from the sky. In this small work, written for the young Count Eugen Wr̄bna, Güssmann writes opposing the hypothesis that meteorites are ejecta from lunar volcanoes, and complains that his previous treatise had been completely ignored by other researchers.

REFERENCES: BL: [T.963.(13.)]. • Burke, *Cosmic Debris*, 1986: p. 30. • LKG: XVI 347. • Wr̄bny, *Pflege der Mineralogie in Böhmen*, 1898: pp. 90-2.

HAARLEM, The Netherlands. Hollandsche Maatschappij.

Die Einschlüsse von Mineralien in krystallisirten Mineralien. ... Naturkundige Verhandelingen Van De Hollandsche Maatschappij der Wetenschappen Te Haarlem. Tweede Verzameling, Negende Deel. Drei Abhandlungen. (Haarlem, 1854).

See: Blum, Johann Reinhard.

HABERLE, Carl Constantin. (BORN: 11 February 1764; DIED: Budapest, Hungary, 31 May 1832) *German meteorologist, botanist & naturalist.*

Haberle became professor of botany at the University of Pest in 1817 and succeeded Paul Kitaibel as director of the botanical garden upon the latter's death. He published in the fields of botany, mineralogy and meteorology.

REFERENCES: Bugyi, B., "Zur Erinnerung an den aus Erfurt stammenden Lehrstuhlinhaber für Botanik an der Universität Budapest Carl Constantin Christian Haberle (1764-1832)," *Beiträge zur Geschichte der Universität Erfurt*, 12 (1965/6), 61-77. • *Catalogue of Portraits of Naturalists*: 519 [1 portrait listed]. • DBA: I 446, 99-111. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • *Neuer Nekrolog der Deutschen*. • Poggendorff: 1, cols. 983-4. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

2039. — German, 1805.

Beiträge | zu | einer allgemeinen Einleitung | in das | Studium der Mineralogie | als | berichtigende Anmerkungen und Zusätze | 1. Zu des Hrn. Prof. Batsch Einleitung in das Studium | der allgemeinen Naturgeschichte, erste Abtheilung | Mineralreich.

| 2. Zu des Hrn. Prof. Haüy *Traité de Minéralogie* und der da= | von erschienen Uebersetzung unter dem Titel: Lehrbuch der | Mineralogie, vom Bürger Haüy. | 3. Zu den bisherigen Lehrbüchern der Mineralogie, nach | des Hrn. Bergrath Werner's System. | Nebst | neuen eigenen Beobachtungen über die Krystallisationsverhält= | nisse und das regelmäßige Gefüge des Arragon's und | des Kalkspathes. | Von | Carl Constantin Haberle | Doctor der Philosophie, der Academie nützlicher Wissenschaften zu | Erfurt, und der mathematisch=physikalischen Gesellschaft daselbst | Mitglied. | [rule] | Mit einem Kupfer. | [tapered rule] | Weimar, | im Verlage des Landes=Industrie=Comptoirs. | 1805.

8°: [i]-xvi, [1]-412, [2] p., one plate.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v-vi], Dedication to Louis von Mielecki.; [vii]-xvi, "Vorrede."; [1]-412, Text.; [2] pgs, Errata.; [At end], One plate.

RARE. This is the author's general introduction to mineralogical studies that includes overviews of A.C.G. Batch's, Haüy's and Werner's classification methods. General principals are described in the areas of crystallography, mineral determination, chemical and physical properties, but the bulk of the volume is taken up by a descriptive mineralogical classification system.

REFERENCES: BL: [726.g.17.]. • NUC: [no copy listed].

2040. — German, 1805.

Sammlung von Krystall-Modellen zur anschaulichen Erläuterung der Grundgestalten, Hauptkerngestalten und Hauptkrystallgestalten der Mineralien so wie auch der Verhältnisse, welche man unter Abstumpfungen, Zuschärfungen und Zusätfungen begreift für Anfänger im Studium der Mineralogie von Dr. C.C. Haberle. Weimar, im Verlage des Landes-Industrie-Comptoirs, 1805.

8°: [1]-38 p.

CONTENTS: [1-2], Title page, verso blank.; [3], "Vorrede."; [3]-6, "Zum Inhalt des Werkes."; 7-38, "Krystall-Modelle. No. 1-106."

VERY RARE. This is another of the very odd crystallographic works intended to be cut apart by the buyer, so that paper crystal models could be folded and glued together. The purpose was to allow the buyer to study crystal forms with cheap 3-dimensional forms rather than the typical flat pictures found in most crystallographic works. In this instance, Haberele has created a text in which 106 such models could be constructed. Due to its intended purpose of being cut apart, very few copies of this title appear to have survived to the present time.

REFERENCES: BL: [no copy listed]. • LKG: IX 29. • NUC: [no copy listed].

2041. — German, 1805.

Characterisirende Darstellung | des zu den | Bertuchschen Tafeln | der | allgemeinen

Naturgeschichte | gehörigen kleinen | Mineralien-Kabinetts | nach | den neuesten mineralogischen und chemischen | Beobachtungen und Erfahrungen entworfen, | und | zur Demonstration des gesammten Mineral-Reichs in | Schulen und Lehranstalten, | so wie auch | zum | Selbstunterrichte | für | Liebhaber der Naturgeschichte | bestimmt | von | Dr. Carl Constantin Haberle. | [rule] | Mit zwei Kupfern. | [tapered rule] | Weimar | im Verlage des Landes-Industrie-Comptoirs. | 1805.

8°: [i]-xxiv, [1]-202, [1] p., 2 plates.

CONTENTS: [i-ii], Title page, verso blank.; iii-x, "Vorbericht" [by F.J. Bertuch]; xi-xvi, "Einleitung" [by C.C. Haberle]; xvii-xx, "Uebersicht der Systematischen Anordnung der sichtbar nicht gemengten Mineralkörper als Gegenstände der Oryctognosie und der ersten Hauptabtheilung der Sammlung."; xxi-xxiv, "Uebersicht der Systematischen Anordnung der Gegenstände der Geognosie oder der zweiten Hauptabtheilung der Sammlung."; [1]-95, "I. Hauptabtheilung der Sammlung. Einfache Mineralkörper."; 96-97, "II. Classe. Laugensalzige oder kalische Mineralkörper."; 98-158, "III. Classe. Mineralkörper von metallischen Hauptgrundlagen."; 159-173, "IV. Classe. Verbrennliche Mineralkörper."; 174-190, "I. Hauptabtheilung der Sammlung. Gegenstände der Geognostischen Hauptlehre der Mineralogie oder der mineralogischen Erdkunde."; 191-192, "Anzeige einiger wesentlicher Druckfehler."; 193-202, "Alphabetisches Verzeichniss der beschriebenen Mineralkörper."

VERY RARE. Charakterisirende representation to the BERTUCH TAFEELN of general natural history due small mineral kabinetts/after the newest mineralogical and chemical observations and experiences sketched, and for the demonstration of the gesammten mineral realm in schools and institutes, as also to PRIVATE STUDIES for lovers of natural history determines HABERLE from DR. CARL CONSTANTIN. With two copper.

Charakterisirende representation | the gemeinnuetzigsten as | to oefftersten vorkommenden | mineralen | with regard | to | Werner's and Haüy's | the observations | and | the newest chemical investigations, | sketched | and | to the use for schools and institutes, thus | as also to private studies for lovers nature | history, who possess already even small mineral | collections, determines | from | Dr. Carl Constantin Haberle. | [rule] | with copper | [tapered rule] | Weimar | in publishing houses of the country industry Comptoirs. | 1806.

Reissue, 1806 under new, more general title: Charakterisirende Darstellung | der gemeinnuetzigsten so wie der | am oefftersten vorkommenden | Mineralien | mit Hinsicht | auf | Werner's und Haüy's | Beobachtungen | und | die neuesten chemischen Untersuchungen, | entworfen | und zum Gebrauch für Schulen und Lehranstalten, so | wie auch zum Selbstunterrichte für Liebhaber der Naturgeschichte, die schon selbst kleine Mineralien- | sammlungen besitzen, bestimmt. | von | Dr. Carl Constantin Haberle. | [rule] | Mit Kupfern. | [tapered rule] | Weimar | im Verlage des Landes-Industrie-Comptoirs. | 1806.

REFERENCES: BL: [990.g.27.]. • LKG: XII 220a. • NUC: [no copy listed].

2042. — German, 1807.

Das | Mineralreich. | Oder charakterisirende Beschreibung aller zur Zeit | bekannten Mineralkörper, | als | Commentar | zu den | Bertuch'schen Tafeln der Allgemeinen Natur= | Geschichte. | [tapered rule] | Ein Handbuch | für Lehrer auf Gymnasien, und für Naturfreunde zu eige= | nem Unterrichte, bei dem Gebrauche dieser Tafeln | von | D. Carl Constantin Haberle. | [rule] | Zweite Hauptabtheilung. | Die Mineralkörper als Gebirgs=Massen betrachtet | oder | Gebirgs=Kunde. | [rule] | Mit Kupfern. | [tapered rule] | Weimar | im Verlage des F.S. privil. Landes=Industrie=Comptoirs | 1807.

8°: [i]-x, [1]-212 p., 2 plates.

CONTENTS: [i-ii], Title page, verso blank.; iii-x, "Vorbericht."; [1], Sectional title page.; [2], Blank.; 3-58, "Einleitung" 58-70, "I. Von der Structur der sichtbar gemengten Mineralmassen im Kleinen."; 70-92, "II. Von den materiellen Verschiedenheiten der Mineralmassen."; 92-130, "III. Von den Gebirgsmasse bildenden Mineralmassen, nach ihren Umfangs= und Structur=Verhältnissen im Großen."; 130-134, "IV. Von der systematischen Eintheilung der Gebirgsmassen, oder dem orognostischen Systeme."; 135-153, "V. Von den Verhältnissen der zufälligen Spalten und Klüfte der verschiedenen Gebirgsmassen."; 153-184, "VI. Von den verschiedenen Gestalts= und Umfangs=Verhältnissen im Allgemeinen."; 185-188, "System der Gebirgskunde. Erste Classe. Urgebirgsmassen."; 188-212, "I. Hauptformationen des Granits."

RARE. The mineral realm. Or charakterisirende description of all at present well-known mineral bodies, as Commentar to the Bertuch boards of the general Natur=Geschichte. A manual for teachers on High Schools, and for nature friends to own informs, with the use of these boards of C Constantin Haberle. – second main abtton healing. Or Gebirgs=Kunde regards the mineral bodies as Gebirgs=Massen. With copper. – Weimar, in publishing houses of the F.S. privil. Landes=Industrie=Comptoirs 1807.

REFERENCES: BL: [970.h.16.].

2043. — German, 1805.

Mineralreich Mit Hinsicht auf die Hauysche Crystallisationslehre und einer kritischen Beurtheilung der letzteren von Carl Constantin Haberle. Doctor der Philosophie, der Academie nützlicher Wissenschaften zu Erfurt, und der mathematisch=physicalischen Gesellschaft daselbst Mitglied. Mit zwei Kupfern. [Nebst] Berichtigende Anmerkungen und Zusätze zu des Herrn Professors A[ugust] J[ohann] G[eorg] C[arl] Batsch Einleitung zum Studium der allgemeinen Naturgeschichte, Erste Abtheilung von Carl Constantin Haberle Doctor der Philosophie, der Academie nützlicher Wissenschaften zu Erfurt, und der mathematisch=physicalischen Gesellschaft daselbst Mitglied. Beiträge zu einer allgemeinen Einleitung

HACQUET

in das Studium der Mineralogie als berichtigende Anmerkungen und Zusätze 1. Zu des Hrn. Prof. Batsch Einleitung in das Studium der allgemeinen Naturgeschichte, erste Abtheilung Mineralreich. 2. Zu des Hrn. Prof. Haüy *Traité de Mineralogie* und der davon erschienenen Uebersetzung unter dem Titel: Lehrbuch der Mineralogie von Bürger Haüy. 3. Zu den bisherigen Lehrbüchern der Mineralogie, nach des Hrn. Bergrath Werner System. Nebst neuen eigenen Beobachtungen über die Krystallisationsverhältnisse und das regelmäßige Gefüge des Arragon's und des Kalkspathes / von Carl Constantin Haberle Doctor der Philosophie, der Academie nützlicher Wissenschaften zu Erfurt, und der mathematisch=physicalischen Gesellschaft daselbst Mitglied. Mit eimen Kupfer. Weimar im Verlage des Landes=Industrie=Comptoirs. 1805.

8°: [i]-xvi, [1]-112, [i]-viii, [i]-vi, [i]-xvi, [1]-412, [2] p., 3 plates.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-vi, "Vorerinnerung" [by F.J. Bertuch]; vii-xvi, "Vorbericht des Hrn. Professor Batsch."; [1]-27, "Erste Abtheilung. Allgemeine Geschichte der Mineralien. I. Grundstoffe."; 37-54, "II. Natürliche Verbindung der Grundstoffe."; 55-70, "IV. Werkstätten der Natur zur Veränderung des Mineralreichs."; 71-112, "V. Erkennbarkeit und Bezeichnung der Mineralarten. Ihr System."; [i]-viii, "Erklärung der Kupfer zum Mineral=Reiche."; [i]-vi, "Alphabetische Anzeige."; [i]-xvi, "Berichtigende Anmerkungen und Zusätze [...] I. Abtheilungen von Carl Constantin Haberle ... Beiträge zu einer allgemeinen Einleitung in das Studium der Mineralogie als berichtigende Anmerkungen und Zusätze ... von Carl Constantin Haberle [...]. Vorrede [vom] Verfasser."; [1]-338, "Berichtigende Anmerkungen und Zusätze zum Ersten [bis] Fünften Kapitel."; 339-396, "Beilage."; 397-412, "Nachtrag."

RARE. Mineral realm with regard to the Haüy Crystallisationslehre and a critical Beurtheilung of the latter of Carl Constantin Haberle. Doctor of philosophy, the Academie of useful sciences to Erfurt, and the mathematisch=physicalischen society daselbst member. With two copper. [together with] correcting notes and additives to the Mr. of professor A[ugust] J[ohann] G[eorg] C[arl] Batsch introduction for the study of general natural history, first abbot healing of Carl Constantin Haberle Doctor of philosophy, the Academie of useful sciences to Erfurt, and the mathematisch=physicalischen society member daselbst. Contributions to a general introduction into the study of the mineralogy as correcting notes and additives 1. To the Hrn. Professor Batsch introduction into the study of general natural history, first abbot healing mineral realm. 2. To the Hrn. Professor Haüy *Traité de Mineralogie* and the translation under the title, appeared of it: Text book of the mineralogy of citizen Haüy. 3. To the past text books of the mineralogy, after the Hrn. Bergrath Werner system. Together with new own observations over the Krystallisationsverhaeltnisse and the regular structure of the Arragon's and the Kalkspathes/of Carl Constantin Haberle Doctor of

philosophy, the Academie of useful sciences to Erfurt, and the mathematisch=physicalischen society member daselbst. With eimen copper. Weimar in publishing houses of the Landes=Industrie=Comptoirs. 1805.

2044. — German, 1804.

Beobachtungen über die Gestalt der Grund- und Keimkrystalle desschörlartigen Berils und dessen übrige oryctognostische und geognostischeVerhältnisse von Carl Constantin Haberle ... Erfurt, 1804.

8°: 23 p. Published as part of the series: *Nova Acta Academiae Electoralis Moguntinae Scientiarum*.

RARE. Originally published in: Erfurt – *Academia Electoralis Moguntina, etc. Nova Acta*, 3 (1799).

REFERENCES: LKG: XVI 167. • NUC: [no copy listed].

2045. — German, 1805.

Einleitung zum Studium der Allgemeinen Naturgeschichte. Ein Handbuch für Lehrer auf Gymnasien, und für Naturfreunde zum eigenen Unterricht. [Nebst] Berichtigende Anmerkungen und Zusätze zu des Herrn Professors A[ugust] J[ohann] G[eorg] C[arl] Batsch Einleitung zum Studium der allgemeinen Naturgeschichte. – Erste-Dritte Abtheilung. – Weimar im Verlage des Landes=Industrie=Comptoirs. 1805-1806.

8°: a-c8; 24ℓ.; [48] p.

RARE. Co-authored with Ludwig Friedrich von Froriep.

HACQUET, Balthasar. (BORN: c1739; DIED: Vienna, Austria, 10 January 1815) *Austrian naturalist, mineralogist & geologist*.

In 1778, Hacquet was appointed a professor at the University of Laibach, which were followed by appointments at the Universities of Lemberg in 1785 and Krakau in 1805. He was a naturalist and is regarded as one of the first true Alpine geologists.

REFERENCES: ABF: I 498, 309-316; II 329, 194. • ADB. • *Catalogue of Portraits of Naturalists*: 520 [1 portrait listed]. • Cleavelly, *World Palæontological Collections*, 1983: p. 140. • DBA: I 452, 397-414. • Feller, *Biographie Universelle*, 1851. • Hacquet, B., *La vita di Belsazar Hacquet ed il suo viaggio a vela sulla Sava da Lubiana a Semlin. Autobiografia di Joannes Antonius Scopoli a cura di G. Pilleri e D. Music*. Waldau-Bern, Schweiz, Verlag des Hirnanatomischen Institutes, 1984. 119 p., [1] folded leaf of plates, illus., facsim., ports. [Contains biographies of B. Hacquet and G.A. Scopoli]. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Jakob, G., "Belsazar Hacquet. Leben und Werke," (pp. 223-6) in: *Grosse Bergsteiger*. München, 1930. • Meixner, *Mineralogischen Erforschung Kärntens*, 1951: p. 20-1. • *Nouvelle Biographie Générale* (Hoefer). • PBA: *Polskie Archiwum Biograficzne*: 141, 123-129 / S58, 6. • Poggendorff: I, col. 986. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91.

2046. — German, 1778-89.

Oryctographia Carniolica, | oder | Physikalische Erdbeschreibung | des | Herzogthums Krain, | Istrien, | und zum Theil der benachbarten Länder. | [vignette] | Erster Theil. | [ornate rule] | Leipzig, | bey Johann Gottlob Immanuel Breitkopf, 1778.



ORYCTOGRAPHIA CARNIOLICA, 1778

4 parts. [Part 1: 1778] 4°: a-b⁴ A-U⁴ X²; 90 ℓ .; [i]-xvi, [1]-162, [2] p., frontispiece (landscape showing a mountain view), one large folding map, engraved title vignette, numerous text vignettes showing mineral specimens. [Part 2: 1781] 4°: a-d⁴ A-Z⁴ Aa²; 110 ℓ .; [i]-xxxii, [1]-186, [2] p., frontispiece, 13 plates, engraved title vignette. [Part 3: 17??] 4°: NOT SEEN. [Part 4: 17??] 4°: NOT SEEN.

CONTENTS: [Part 1] [i-ii], Title page, verso "Pres use shele eniga..."; [iii-iv], Dedication.; [v-vi], "Erklärung I der Vignetten."; [vii-xvi], "Vorrede."; [1]-162, Text.; [1 pg], "Verbesserungen."; [1 pg], Blank.

[Part 2] [i-ii], Title page, verso "Pres use shele eniga..."; [iii-iv], Dedication.; [v]-xvi, "Erklärung I der Kupfer und Vignetten."; [xvii]-xxxii, "Vorrede."; [1]-186, Text.; [1 pg], "Zusatz zu S. 152."; [1 pg], "Nachricht an den Buchbinder."

PLATES: The second part contains the following plates: 1. Folding map. 2. Cross-sectional map of a mine (folding). 3. Cross-sectional map of a mine (folding). 4. Map (folding). 5. Interior of a mine (folding). 6. Water works (folding). 7. Detail of furnace (folding). 8. Detail of furnace (folding). 9. Diagrams (folding). 10. Underground detail (folding). 11. Underground detail (folding). 12. Underground detail (folding). 13. Mineral specimens.

RARE. A heavily illustrated work, describing the geology, paleontology and mineral riches of Istria (now ??????) where the author lived a number of years.

REFERENCES: BL: [457.d.11.12.]. • *Freilich Sale Catalog*: no. 219 [complete four volumes]. • LKG: XIV 256. • Ward & Carozzi, *Geology Emerging*, 1984: no. 982. • Zittel, *Geschichte der Geologie*, 1899: p. 89n.

2047. — German, 1780.

Nachricht von Versteinerungen von Schalthieren die sich in ausgebrannten feuerspeyenden Bergen finden; zur Erläuterung und Ergänzung der Abhandlung des Herrn Abt Fortis über das Thal Ronca im veronesischen Gebiete; herausgegeben und mit Anmerkungen vermehrt von Johann Samuel Schröter ... Weimar, C.L. Hoffmanns seel. Wittve und Erben, 1780.

8°: A-C⁸ D⁷; ?? ℓ .; [1]-61 p., 2 folding plates. Primarily in German, with some Latin and Italian text.

RARE. First edition, edited by JOHANN SAMUEL SCHRÖTER. Primarily in German, with some Latin and Italian text. Includes bibliographical references.

Subjects: Crustacea. Mollusks.

REFERENCES: LKG: XIV 645c.

2048. — German, 1784 [2nd edition].

Hacquet's mineralogischbotanische Lustreise, von dem Berg Terglou in Krain, zu dem Berg Glokner in Tyrol, im Jahr 1779 und 81. Zweite veränderte und vermehrte Auflage. Wien, Im Verlag J.P. Krausischen Buchhandlung, 1784.

8°: 149 p., engraved title vignette, 4 folding plates.

RARE. Describes the geology and natural history of the Carpathian and Transylvanian mountains.

REFERENCES: BL: [980.k.11.(1.)]. • LKG: XIV 257a.

2049. — German, 1785.

Physikalisch-politische Reise aus den Dinarischen durch die Julischen, Carnischen, Rhätischen in die Norischen Alpen im Jahren 1781 und 1782 ... Leipzig, Verlegts Adam Friedrich Böhme, 1785.

2 vols. [VOL 1: 1785] 8°: xviii, 156 p., plates V-VI, illus. [VOL 2: 1785] 8°: [6], 220 p., plates VII-VIII, illus. RARE.

Facsimile reprint, 1988: *Physikalisch-politische Reise aus den Dinarischen durch die Julischen, Carnischen, Rhätischen in die Norischen Alpen*. Bearbeiten von Hedwig Rüber und Axel Strasser. Herausgegeben vom Deutschen Alpenverein. München, F. Bruckmann, 1988. 488 p., illus. [ISBN 3-7654-22533; MH DQ828 .H33 1989].

REFERENCES: BL: [980.k.11.(2.)]. • LKG: XIV 247.

2050. — German, 1790-6.

Neueste physikalische-politische Reisen in den Jahre 1788. und 1789. Durch die Dacischen und Sarmatischen oder Nördlichen Karpathen. Nürnberg, Raspe 1790

Four parts in two vols. [Part 1] 8°: xxiv (ie., xxii), 206, [2] p. [Part 2] 8°: xvi, 249, [9] p. [Part 3] 8°: xix, [iii], 247, [1] p. [Part 4] 8°: xiii, [iii], 254, [4] p. Separate titles to each part, engraved vignette maps on all titles. With engraved frontispiece, 25 folding plates (22 hand-coloured) and 3 large folding tables, 1 folding map and 27 text engravings.

RARE. The author's remarkable work of paleontology, mountaineering and botany from a decidedly geological and mineralogical point of view.

HAIDINGER

It is a valuable study of the most eastern range of the Alps with extraordinary illustrations (some panoramic views) depicting ethnographic observations of regional inhabitants in their native costumes, and detailed descriptions of the local flora, fauna, and other botanics, as well as stratigraphic renderings of stones, ore, minerals and fossils.

Each of the four volumes describes the travels for a number of years. For example, I. 1788 and 1789; II. 1788, 89 and 90; III. 1791, 92 and 93; IV. 1794 and 95.

REFERENCES: BL: [959.d.14-17.]. • LKG: XIV 397.

2051. — German, 1791.

Reise durch die nordischen Alpen, physikalischen und andern Inhalts, unternommen in den Jahren 1784 bis 1786. Mit Kupfern. Nürnberg, In der Raspischen Buchhandlung, 1791.

2 parts in one volume. 8°: [16], 263 p, 4 folding plates. RARE.

REFERENCES: BL: [981.c.8.]. • LKG: XIV 248a. • NUC: [no copy listed].

2052. — German, 1792.

Physischen und sechniethen Beschreibung der Flintensteine, wie sie in der Erde vorkommen und deren Zurichtung zum oekonomischen Gebrauche ... Wein, 1792.

8°: [8], 64 p., engraved title vignette, 2 engraved plates.

RARE. In this writing, Hacquet directed the attention of Austrian industry to native flint which had been thus far been neglected, and was being at the time imported from France.

REFERENCES: BL: [B.404.(6.)]. • Ferchl: p. 208. • LKG: XVI 276. • NUC: [no copy listed]. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91: 7, 164.

2053. — German, 1806.

Bemerkungen über die Entstehung der Feuer- oder Flintensteine. Ein kleiner Beitrag zu der in den Jahren 1788 und 1797 erschienenen physikalische und verschiedene Beschreibungen derselben. Berlin, Im Verlage der Realschulbuchhandlung, 1806.

8°: 32 p. RARE.

REFERENCES: LKG: XVI 277. • NUC: [no copy listed].

HAGER, Johannes Balthasar.

2054. — Latin, 1593 [Dissertation].

[Contained within an ornately ruled box:] Theoria De Fossilibvs. | Quam post Solennem inavgvartionem suam, ceterorumq̃ Philo- | sophiæ candidatorum, Anni 1593. 5. Cal. Maij | Herbipoli celebratam. | In Avla Academica | publicæ dispytationi proponent. | Ioannes Balthasar Hage- | rvs Vberlinganvs. Liberalivm | arsium & Philosophiæ Magister. | Georgivs Grobivs Mellersta- | dianvs Reverandissimi At Qve Illv- | strißissi Principis

Herbipoleusis Alumien & liberalium | artium ac Philosophiæ Magister. | Henricvs Rothavsen Monaste- | riensis Societatis Iesv. | [ornament] | Wirceburgi | Excidebat Geprgois Fleischmannus.

4°: π^2 A-G⁴; 30ℓ.; no pagination, [60] p. Allegory woodcut on the verso of the title page. Woodcut intial letters throughout.

CONTENTS: π 1r- π 1v, Title page, verso large allegory woodcut showing a Christian theme.; π 2r, Dedication, dated 5 May 1893 [sic; should read 1593]; π 2v, Blank.; A1r, top of page, "Proœmivm Ad Dispytationem | De Fossilibvs."; A1r-G4r, Text.; G4v, Blank.

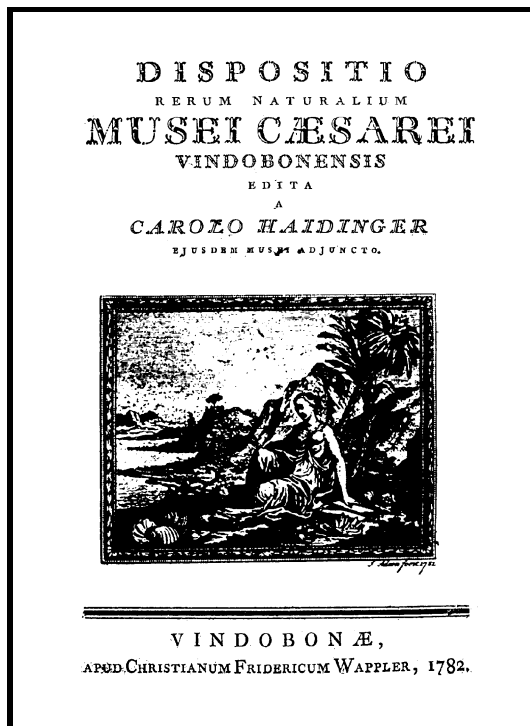
VERY RARE. Dissertation, University of Würzburg, presented 27 April 1593. It describes the generation of fossils, minerals and stones in the context of a Aristotelian philosophy.

REFERENCES: BL: [444.c.37.]. • VD16: H-181.

HAIDINGER, Karl. (BORN: Vienna, Austria, 10 July 1756; DIED: Vienna, Austria, 16 March 1797) *Austrian naturalist.*

Haidinger was first an adjunct to the royal natural history cabinet in Vienna, before becoming professor of mining at the academy in Chemintz, Hungary. Ultimately he was appointed mining inspector by the Bureau of Mining and Mints in Vienna.

REFERENCES: *Abhandlungen einer Privatgesellschaft in Böhmen*: 5 (1837), ?? [from Poggendorff]. • ADB. • Baur, *Allgemeines historisches Handwörterbuch*, 1803. • DBA: I 461, 258-269; II 513, 124-125. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Meusel, *Verstorbenen Teutschen Schriftsteller*, 1802-16. • Poggendorff: 1, col. 996. • WBI. • Wurzbach, *Biographisches Lexikon Österreich*, 1856-91: 7, 206.



DISPOSITIO RERUM NATURALIUM MUSEI, 1782

2055. — Latin, 1782 [Collection catalog].

Dispositio | Rerum Naturalium | Musei Cæsarei | Vindobonensis | Edita | A | Carolo Haidinger | Ejusdem Musei Adjuncto. | [vignette] | [ornate rule] | Vindobonæ, | apud Christianum Fridericum Wappler, 1782.

[SECOND TITLE PAGE:]

Dispositio | Rerum Naturalium | Musei Cæsarei | Vindobonensis | Edita | A | Carolo Haidinger | Ejusdem Musei Adjuncto. | [ornate rule] | Vindobonæ, | apud Christianum Fridericum Wappler, 1782.

4°: π^1 A-G⁴ H³; 31ℓ.; [2], [1]-61, [1] p. Head- and tailpieces. PAGE SIZE: 218 x 154 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1-2], Second title page (no vignette), verso blank.; [3]-10, Introduction.; [11]-61, Text.; [1 pg], Blank.

RARE. A catalog of the minerals in the Royal collection at Vienna, fully annotated with references to the leading mineralogists of the day. It is divided into the following classes: metals, combustible minerals, salts, earths, and stones. There is also a description of the collection's volcanic products and fossils. The first pages, which act as an introduction, provide a short history of the collection. This is apparently the first published account of the mineral collection of this remarkable institution.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 267. • LKG: XV 35. • Murray, *Museums*, 1904: 3, 245. • NUC: [no copy listed]. • Ward & Carozzi, *Geology Emerging*, 1984: no. 984.

2056. — German, 1782.

Eintheilung | der kaiserl. königl. | Naturalien-sammlung | zu | Wien. | [rule] | Herausgegeben | von | Karl Haidinger, | Adjunkten am k.k. Naturalienkabinet. | [ornament] | [double rule] | Wien, | bey Christian Friedrich Wappler, 1782.

8°: 104 p.

RARE. A faithful translation of *Dispositio Rerum Naturalium Musei Cæsarei Vindobonensis* (Vienna, 1782) [which see previous entry].

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 267. • LKG: XV 34. • Murray, *Museums*, 1904: 3, 245.

2057. — German, 1787.

Systematische Eintheilung der Gebirgsarten von Karl Haidinger ... eine Abhandlung, welcher am 30ten Dezember 1785 von der kais Akademie zu St. Petersburg der Preis zuerkannt wurde. Wien, Gedruckt und verlegt bey Christian Friedrich Wappler, 1787.

4°: π^1 A-K⁸ χ^1 ; 41ℓ.; [2], [1]-82 p. (pages 43 misnumbered 34, 72 as 27). Title vignette. Head- and tail pieces.

VERY SCARCE. First published in Russian at St. Petersburg in 1786 as a prize winning essay, this is the works first separate appearance.

REFERENCES: Ferchl: 211. • LKG: XIII 172b.

2058. — German, 1787.

Entwurf einer systematischen Eintheilung der Gebürs-Arten. Ein Versuch, zur Beantwortung der von der Russischen kayserlichen Akademie der Wissenschaften für das Jahr 1785 aufgegebenen Frage, welcher den Preiss erhalten hat. [Wein, 1787.]

8°: 64 p.

VERY SCARCE. Concerns petrology.

HAIDINGER, Wilhelm Karl Ritter von. (BORN: Vienna, Austria, 5 February 1795; DIED: Dornbach, near Vienna, Austria, 19 March 1871) *Austrian mineralogist & geologist.*

Haidinger received his basic education in Vienna, but moved to Graz in 1812, where he became assistant to F. MOHS. Mohs recommended him as a traveling companion to Count Breunner, and it was during these travels he was introduced to Georges Cuvier [1769-1832] and J.-B. Biot [1774-1862] in Paris and George Greenough [1778-1855], David Brewster [1781-1868] and T. ALLAN in Edinburgh. Haidinger must have made an impression in Edinburgh as he was hired to arrange Allan's mineral collection in 1823. While in Scotland, he began to publish papers on the determination of mineral species as well as his first major work, an English translation of Frederick Mohs *Grundriss der Mineralogie* (2 vols., Dresden, 1822-4), which was published in 1825. After 1827, Haidinger also became interested in pseudomorphs and the absorption of light in crystals—the later studies probably sparked by his association with David Brewster. In 1827, he returned to Elbogen, Austria where he worked in a china factory founded by his two brothers. He remained there until 1840 when an appointment as an inspector of mines (Bergrath) took him to Vienna. Through many years of patient lobbying, Haidinger helped establish the Austrian Geological Survey in 1849, of which he was named its first director. Haidinger also was a co-founder and member of the Imperial Royal Geographical Society in Vienna, co-founder of the Werner Association for Geological Research in Moravia and Silesia, co-founder of the Geological Association for Hungary, and co-founder of the Società geologica Milan. Haidinger is also credited with discovering a phenomena that enables detection of plane polarized light, now known as “Haidinger's brushes” in his honor.

REFERENCES: ADB: 10, 381. • *Almanach der Akademie der Wissenschaften in Wien*: 21 (1871), 159-204. • *American Journal of Science*: 3rd Series, 101 (1871), 392. • Anonymous., “Abschiedsgruss von Wilhelm von Haidinger,” *Neues Jahrbuch für Mineralogie, Geologie und Paläontologie*, 1868, 377-84. • *Ausland*: 44 (1871), 449-52. • Barr, *Index to Biographical Fragments*, 1973: 109. • *Bericht über die Haidinger-Feier am 5. Februar 1865*, Vienna, 1865. [Commemoration of Haidinger's 70th year.]. • Bonn, *Corresp. Blatt Nat. Hist.* Ver.: 1871, 15-21. • Cleavelly, *World Palæontological Collections*, 1983: 140. • DBA: I 461, 271-295; II 513, 129-145. • DSB: 6, 18-20 [by J. Weavers]. • *Encyclopaedia Britannica*, 11th edition. • *Geological Magazine*: 8 (1871), no. 84, 240. • *Jahrbuch der k.k. Geologischen Reichsanstalt*, Wien: 21 (1871), 31-40 [by F. von Hauer]. • *Jahrbuch der k.k. Geologischen Reichsanstalt*, Wien: 6 (1856), v-xix [“Die Haidinger Medaille”]. • Johannsen, *Descriptive Petrography*, 1939: 2, 72, portrait. • Lambrecht & Quenstedt, *Catalogus*, 1938: 183. • *Maygar Tud. Ak. Évk.*: 13 (1876), no. 10, 15-27. • *Nature*: 3 (1871), 450. • NDB: 7, 519-20 [by H. Meixner]. • Poggendorff: 1, cols. 996-7 & 3, 573-4. • *Proceedings of the Edinburgh Royal Society*: 7 (1869-72), 537-8. • *Proceedings of the Royal Society of London*: 20

HAIDINGER

(1872), xxv-xxvii. • *Quarterly Journal of Geological Society of London*: 28 (1872), 1-1i. • *Revue Cours Scient.*: 1 (1871), 410-4. • Sarjeant, *Geologists*, 1980: 2, 1178. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 1, 31-2. • WBI. • *World Who's Who in Science*: 1735.

2059. — German, 1829.

Anfangsgründe | der | Mineralogie. | [double rule] | zum | Gebrauche Bei Vorlesungen. | Von | Wilhelm Haidinger. | [rule] | Nebst 15 Kupfertafeln. | [rule] | [double rule] | Leipzig, 1829. | Verlag von Joh. Ambr. Barth, | und in Commission | der F. Beckschen Universitätsbuchhandlung in Wien.

8°: vi, 312 p., 15 engraved plates.

SCARCE. The author's introduction to mineralogy.

REFERENCES: Dana's 7th (Bibliography): 72. • *Freilich Sale Catalog*: no. 220. • NUC: 226, 284-5 [NH 00333502].

2060. — German, 1843.

Bericht | Über Die | Mineralien – Sammlung | Der | K.K. Hofkammer Im Münz- Und Bergwesen. | [rule] | Von | Wilhelm Haidinger, | [...5 lines of titles and memberships...] | Mit zwei Steindrucktafeln. | [double rule] | Wien. | Gedruckt Und Im Verlage Bei Carl Gerold. | 1843.

4°: π^4 1-194 203; 83ℓ.; [i]-viii, [1]-156, [2] p., 2 plates. PAGE SIZE: 260 x 200 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Karl Friedrich Freiherrn Kübeck von Kübaw.; [iv], Blank.; [v-vi], Text of dedication signed Wilhelm Haidinger, 8 June 1842.; [vii]-viii, "Vorwort."; [1]-149, Text.; [150], Blank.; [151]-156, Index.; [1 pg], "Inhalt."; [1 pg], Blank.

VERY SCARCE. This is a catalog of the mineral collection of the *K.K. Hofkammer Im Münz- Und Bergwesen*, which was founded in 1835. The two plates show (1) 2 figures of the typical show cases with dimensions and (2) a plan of the museum's layout.

REFERENCES: BMC: 5, 2218. • NUC: 226, 284-5 [NH 00333512]. • *Partsch, Katalog der Bibliothek*, 1851: no. 468. • *Roller & Goodman, Catalogue*, 1976: 1, 501.

2061. — German, 1845 [First edition].

Handbuch | der | Bestimmenden | Mineralogie, | enthaltend | die Terminologie, Systematik, Nomenklatur | und Charakteristik | der | Naturgeschichte des Mineralreiches. | [rule] | Von | Wilhelm Haidinger, | [...3 lines of titles and memberships...] | [ornate rule] | Wein, | Bei Braumüller & Seidel. | 1845.

8°: π^8 b⁸ c² 1-398 403; 333ℓ.; [i]-xxxvi, [1]-630 p., 560 text illus.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Prince Johann.; [iv], Blank.; [v]-[vii], Text of dedication, signed W. Haidinger, 20 January 1845.; [viii], Blank.; [ix]-xiv, "Vorrede."; [xv]-xxxvi, "Inhalt."; [1]-591, Text.; [592], "Verzeichniss | der beschriebenen oder erwähnten mineralogischen | und physikalischen Apparate."; [593]-625, "Register."; [626]-630, "Berichtigungen Und Zusätze."

VERY SCARCE. Organized upon the Mohs system of classification.



KRISTALLOGRAPHISCH FIGUREN-TAFELN, 1846

REFERENCES: Dana's 7th (Bibliography): 72.

2062. — German, 1846 [Atlas].

[Contained within an ornate double rule box:] Krystallographisch-Mineralogische | Figuren-Tafeln | zu dem | Handbuche Der Bestimmenden Mineralogie | von | Wilhlem Haidinger, | [...2 lines of titles and memberships...] | [rule] | Wien. | Bei Braumüller & Seidel. | 1846.

Oblong 2°: [4] p., 15 plates. PAGE SIZE: 295 x 420 mm.

CONTENTS: [2 pgs], Title page, verso "Gedruckt bei Anton Benko in Wien."; [1 pg], "Vorwort."; [1 pg], "Inhalt."; [At end], 15 plates numbered I-XV showing all manner of apparatus and crystal drawings.

VERY RARE. Published the year after Haidinger's *Handbuch der Bestimmenden Mineralogie*, this rarely mentioned atlas shows all manner of crystallographical apparatus and many crystal diagrams. It was meant to accompany the *Handbuch*; however its rarity suggests that not many copies of the atlas were prepared.

REFERENCES: BMC: 2, 765.

2063. 2nd edition, 1850: Handbuch | der bestimmenden | Mineralogie, | enthaltend die | Terminologie, Systematik, Nomenklatur | und Charakteristik | der | Naturgeschichte Des Mineralreiches. | [rule] | Von | Wilhelm Haidinger, | [...5 lines of titles and memberships...] | Zweite unveränderte Ausgabe. | Mit 560 Holzschnitten. | [ornate rule] | Wein, 1850. | Wilhelm Braumüller, | Buchhändler des k.k. Hofes und der kais. Akademie der Wissenschaften.

8°: π^8 b⁸ c² 1-398 403; 317ℓ.; [i]-xxxvi, [1]-630 p., 560 text illus. VERY SCARCE.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Prince Johann.; [iv], Blank.; [v]-[vii], Text of dedication, signed W. Haidinger, 20 January 1845.; [viii], Blank.; [ix]-xiv, "Vorrede."; [xv]-xxxvi, "Inhalt."; [1]-591, Text.; [592], "Verzeichniss | der beschriebenen oder erwähnten mineralogischen | und physikalischen Apparate."; [593]-625, "Register."; [626]-630, "Berichtigungen Und Zusätze."

REFERENCES: Dana's 7th (Bibliography): 72.

2064. 3rd edition, 1865: Handbuch der bestimmenden Mineralogie, enthaltend die Terminologie, Systematik, Nomenklatur und Charakteristik der Naturgeschichte des Mineralreiches. Von Wilhelm Haidinger ... Neue Ausgabe zur Jubelfeier des Verfassers. Wein: Wilhelm Braumüller, 1865.

8°: xxxvi, 630 p., 765 text illus.

VERY RARE. Prepared in celebration of Haidinger's 70 birthday, this is a reprint of the original edition of 1845,

with a new title page and the addition of a biographical sketch.

REFERENCES: NUC: 226, 284-5 [NH 00333534, 00333535 & 00333536].

2065. — German, 1845.

Uebersicht der Resultate mineralogischer Forschungen im Jahre 1843. Erlangen: Ferdinand Enke, 1845.

8°: [2], 150 p., [1] leaf of plates (folded). Includes bibliographical references and index.

RARE. The first presentation of a series that would be carried on by ADOLF KENNGOTT under the same title.

REFERENCES: BMC: 2, 765. • Dana's 7th (Bibliography): 73. • NUC: 226, 284-5 [NH 0033620].

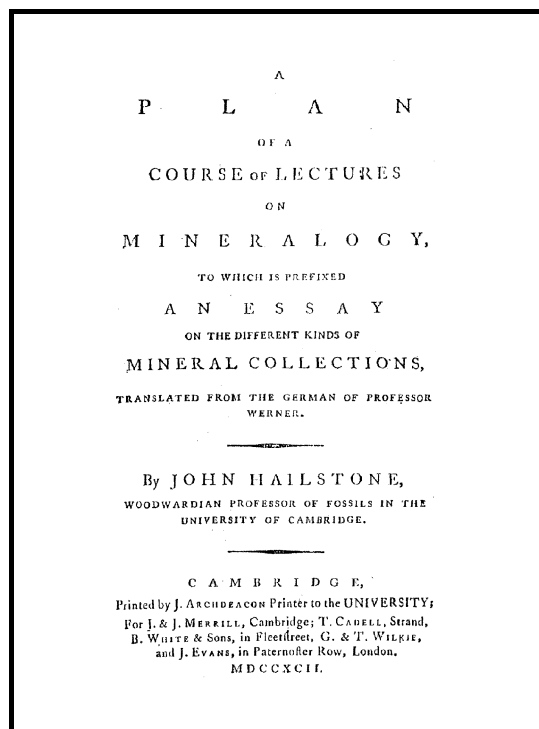
Naturwissenschaftliche Abhandlungen ... Herausgegeben von Wilhelm Haidinger. (Wien, 1847-1851).

See: *Naturwissenschaftliche*.

HAILSTONE, John. (BORN: Yorkshire, England, 13 December 1859; DIED: 1847) *English geologist*.

Second wrangler, Trinity College, Cambridge, 1783; fellow of Trinity College, 1784; Woodwardian professor of geology, Cambridge, 1788-1818; vicar of Trumpington, 1817-47; F.R.S., 1801; original member of the Geological Society of London; made additions to the Woodwardian Museum, Cambridge.

REFERENCES: BBA: I 499, 409-410. • DNB: 24, 1. • Poggendorff: 1, cols. 998-9. • *Proceedings of the Geological Society, London*: 5 (1849), xix-xx. • Sarjeant, *Geologists*, 1980: 2, 1178-9. • Watt, *Bibliotheca Britannica*, 1824. • WBI.



PLAN OF A COURSE OF LECTURES, 1792

2066. — English, 1792.

A | Plan | Of A | Course of Lectures | On | Mineralogy, | To Which Is Prefixed | An Essay | On The Different Kinds Of | Mineral Collections, | Translated From The German Of Professor | Werner. | [tapered rule] | by John Hailstone, | Woodwardian Professor Of Fossils In The | University Of Cambridge. | [tapered rule] | Cambridge, | Printed by J. Archdeacon Printer to the University; | For J. & J. Merrill, Cambridge; T. Cadell, Strand, | B. White & Sons, in Fleetstreet, G. & T. Wilkie, | and J. Evans, in Paternoster Row, London. | MDCXCII.

8°: π^3 A-E⁸ F⁴; 47 ℓ .; [2], [i]-iv, [1]-88 p.

CONTENTS: [2 pgs], Title page, verso blank.; [i]-iv, "Preface"—dated June 24, 1792.; [1]-41, "On the Different Sorts of Collections of which a complete Cabinet of Fossils ought to Consist. By A.G. Werner ..."; [42]-43, Commentary by Hailstone about Werner's treatment of the Ohain collection not contained in the previous section.; [44]-47, "Appendix."—discussion of Michael Mercati's collection of minerals.; [48], Blank.; [49]-53, "Plan of a Course of Lectures on Mineralogy. Introduction.; 54-57, "Part the First. Description of Fossils."; 58-78, "Part the Second. Systematical Arrangement of Fossils."; 79-88, "Part the Third. Geognosy or the Knowledge of the Earth's internal Structure."

VERY RARE. Hailstone studied under Werner at Freiberg and based this work on the theories of his former teacher, as well as one of Werner's articles, "Von den verschiednerley Mineraliensammlungen, aus denen ein vollständiges Mineralienkabinett bestehen soll" (see: *Sammlungen zur Physik und Naturgeschichte*, 1 (1778), 387-420). Although the title of this work and Hailstone's position as Woodwardian Professor of geology at Cambridge would dictate otherwise, it is not clear that he ever delivered a single lecture.

REFERENCES: LKG: VI 106*. • Woodward, *History of the Geological Society*, 1907: 64.

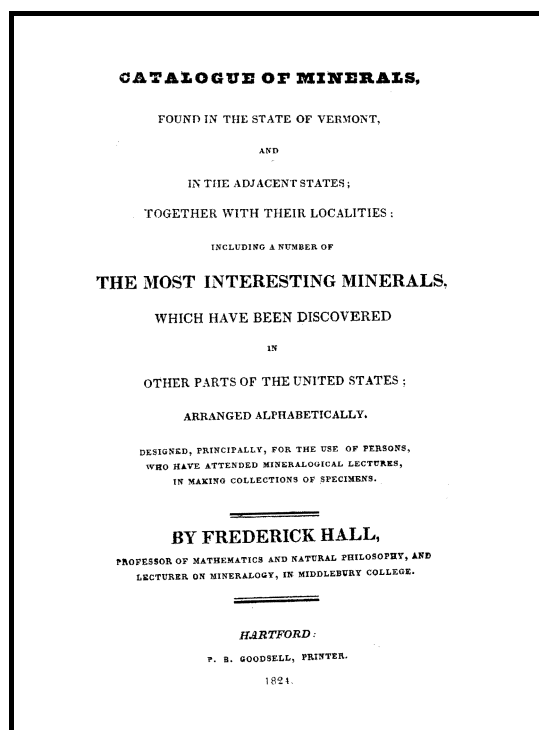
HALL, Frederick. (BORN: Grafton, Virginia, U.S.A., 1780; DIED: Peru, Illinois, U.S.A., 27 July 1843) *American chemist & mineralogist*.

After graduating from Dartmouth in 1803, Hall tutored there for a year before accepting a position at Middlebury College. He taught mathematics and natural philosophy there until 1824. In 1808 he visited Europe, meet many of the notable scientists and sent back word of Humprey Davy's isolation of potassium and sodium—probably the first announcement to reach America. During his forties, Hall studied to become a physician, receiving his M.D. from Castleton (exinct) in 1827. From 1824 to 1828, he taught chemistry and mineralogy at Trinity College. He then went to Baltimore as president of Mt. Hope College (exinct) and from 1835 onwards he also lectured on mineralogy at Columbian College in Washington, D.C. In 1840, he was elected to a professorship in chemistry and pharmacy in Columbian's Medical School. Perhaps to seek information on mineral resources, Hall traveled west in the spring of 1843. Several weeks later word arrived back that he had succumbed to some form of cerebral disease.

REFERENCES: ABA: I 677, 208-211. • Adams, *Dictionary of American Authors*, 1904. • *American Chemists & Chemical Engineers*: 2, 119-20 [by W.D. Miles]. • *American Journal of Science*: 1st Series, 45 (1843), 404. • *Appleton Cyclopedia of American Biography*. • Barr, *Index*

HALL

to *Biographical Fragments*, 1973: 109. • Drake, *Dictionary of American Biography*, 1872. • Elliott, *Biographical Index*, 1990: 97. • Herringshaw's *National Library of American Biography*. • *Lancet Clinic*: 2 (1843-4), 200. • *National Cyclopaedia of American Biography*: 3,. • Wallace, *Dictionary of North American Authors*, 1951. • WBI.



CATALOGUE OF MINERALS, 1824

2067. — English, 1824.

Catalogue | Of | Minerals, | Found In The State Of Vermont, | And | In The Adjacent States; | Together With Their Localities: | Including A Number Of | The Most Interesting Minerals, | Which Have Been Discovered | In | Other Parts Of The United States; | Arranged Alphabetically. | Designed, Principally, For The Use Of Persons, | Who Have Attended Mineralogical Lectures, | In Making Collections Of Specimens. | [double rule] | By Frederick Hall, | Professor Of Mathematics And Natural Philosophy, And | Lecturer On Mineralogy, In Middlebury College. | [double rule] | Hartford: | P.B. Goodsell, Printer. | 1824.

8°: π^2 2-64; 22 ℓ .; [1]-44 p. PAGE SIZE: 215 x 124 mm.

CONTENTS: [1-2], Title page, verso "District of Connecticut, ss."; [3]-4, "Advertisement."; [5]-44, Text.

VERY SCARCE. This is the earliest example published in the United States of a separately issued state mineralogy. Approximately 140 mineral species are alphabetically arranged and described within this

slim volume. Most species mentioned have localities within the state boundaries of Vermont, while a few are found only in the adjoining states. For his research, Hall relied heavily upon the mineralogical texts of PARKER CLEVELAND and HENRY SCHOOLCRAFT, as well as the periodical *The American Journal of Science*.

REFERENCES: Hazen & Hazen, *American Geological Literature*, 1980: no. 4650 [lists 3 notices of].

2068. — English, 1836.

A Synopsis of a Course of Lectures on Mineralogy Delivered at the Medical College, Washington, in the Winter of 1835-6. Washington: J. Gideon, jr. (printer), 1836. By Frederick Hall, M.D., L.L.D., late president of Mount Hope College, Md. Washington, Jacob Gideon, Jr., printer, 1836.

4°: [1]-24 p.

VERY RARE. Hall was probably self-taught as a mineralogist there being few formal classes in the subject in New England. Even so, he excelled in the subject and was able to offer in the winter of 1835-6 a course on the subject. It consisted of 30 lectures. Students were also allowed to view more than 5,000 specimens from his own collection to reenforce concepts taught. Non-students could also attend at a cost of \$10 per head. In 1838, he gave Dartmouth \$5,000 to endow a professorship of mineralogy, plus specimens appraised at \$5,000. In addition, he bequeathed the college, his alma mater, land valued at several thousand dollars and the remainder of his collection for the same purpose.

REFERENCES: *American Chemists & Chemical Engineers*: 2, 119-20 [by W.D. Miles]. • Evans, *American Bibliography*: no. 37861. • Hazen & Hazen, *American Geological Literature*, 1980: no. 4655.

HALL, Townshend M. *English geologist & mineralogist*.

Hall was a Fellow of the Geological Society of Great Britain.

2069. — English, 1868.

The | Mineralogist's Directory: | Or, | A Guide | To | The Principal Mineral Localities | In The | United Kingdom of Great Britain and Ireland. | By | Townshend M. Hall, F.G.S. | [rule] | London: | Edward Stanford, 6, Charing Cross, S.W. | [short rule] | 1868.

8°: xii, 168 p. A topographical mineralogy describing the localities where minerals may be found in England, Scotland, Wales and Ireland. SCARCE.

REFERENCES: BMC: 1, ??.

HALLOY, Jean Baptiste Julien D'Omalus D'.

See: Omalus D'hallow, Jean Baptiste Julien D', Baron.

HAMILTON, William, Sir. (BORN: Henley-on-Thames, Park Place, London, England, 13 December 1730; DIED: London, England, 6 April 1803) *English diplomat & archeologist*.

Diplomat, archaeologist, and collector, and British envoy and plenipotentiary at Naples from 1764, where



HAMILTON

his embassy became a cultural and musical centre; he entertained many travellers on the Grand Tour, studied Vesuvius (recording his observations in *Campi Phlegraei: Observations on the Volcanos of the Two Sicilies*, 1776), collected so-called Etruscan vases and paintings, and in 1791 married, as his second wife, Emma Hart (born Amy Lyon) who was to achieve notoriety as the mistress of Nelson. The Hamiltons were recalled to England in 1800, where Sir William died, with both Emma and Nelson attending his deathbed. His friends and correspondents included Beckford and Horace Walpole, and his collections exerted a wide influence on neo-classicism in Britain; one of his most important collections of vases, terracottas, coins, etc., sold to the British Museum in 1771, laid the foundation for its department of classical antiquities.

Fourth son of Lord Archibald Hamilton. In 1758 he married Catherine Barlow, the daughter of Member of Parliament Hugh Barlow. He became ambassador of England in Naples in 1764. He studied the excavations at Pompei and published scientific books on vases. His first collection of vases he sold to the British Museum, the second collection went down with the ship that was transporting them to England on 12 Oct 1798.

After Catherine's death he married Emma Lyon when he was sixty years old. Emma eventually became far more famous than her husband as the mistress of Lord Nelson.

Hamilton was elected FRS in 1766,

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • Barr, *Index to Biographical Fragments*, 1973: 111. • BBA: I 510, 1-20, 26-41. • *Eminent Scotsmen*. • *Encyclopaedia Britannica*, 11th edition. • Poggendorff: 1, cols. 1009-10. • Principe, *Volcanology in the 18th Century*, 2000. • Sarjeant, *Geologists*, 1980: 2, 1190. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 697. • Waller, *Dictionary of Universal Biography*, 1857-63. • Watt, *Bibliotheca Britannica*, 1824. • WBI. • *World Who's Who in Science*: 744.

2070. — English, 1772.

Observations on Mount Vesuvius, Mount Etna, and other Volcanos, in a series of letters addressed to the Royal Society, from the Honourable Sir William Hamilton ... To which are added, explanatory notes by the author, hitherto unpublished. London, T. Cadell, 1772.

8°: [i]-iv, [1]-179, [1] p., frontispiece (folding map), 5 plates.

VERY SCARCE. Edited by the publisher Thomas Cadell. While he was the British Envoy to the Court of Naples, Hamilton made many important observations on the volcanoes of the region including Etna and Vesuvius as well as the extinct volcanoes of the Rhineland. With the companionship of the geologist and naturalist Hugh Strickland [1811-1853] the pair studied the vulcanology and geology of Asia Minor. Their observations were sent to the Royal Society in a series of important letters, which were gathered together and published as this study. Later, Hamilton would follow up on this work with his magnificently illustrated and monumental *Campi Phlegraei* [which see entry below].

REFERENCES: LKG: XIV 604.

2071. 2nd edition, 1773: Observations | On | Mount Vesuvius, | Mount Etna, | And Other Volcanos: | In | A Series Of Letters, | Addressed To The Royal Society, | From the Honourable Sir W. Hamilton, | K.B.F.R.S. | His Majesty's Envoy Extraordinary and Plenipotentiary | at the Court of Naples. | To which is added, | Explanatory Notes by the Author, | hitherto unpublished. | The Second Edition. | London, | Printed for T. Cadell, in The Strand. | MDCCLXXIII.

8°: [i]-iv, [1]-179, [1] p., frontispiece (folding map), 5 plates.

VERY SCARCE. Second edition, edited by Thomas Cadell.

REFERENCES: LKG: XIV 604.

2072. Reissue(?), 1774: Observations on Mount Vesuvius, Mount Etna, and other Volcanos, in a series of letters addressed to the Royal Society, from the Honourable Sir William Hamilton ... To which are added, explanatory notes by the author, hitherto unpublished. A new edition. London, Printed for T. Cadell, 1774.

8°: A² B-M⁸ N²; 92ℓ.; iv, 179, [1] p., 6 engraved plates: numbered Plate I-IV (single-page plates, at pp. 40, 41, 44, 55, 89) and 'Philos. Trans Vol. LXI. Tab.I', signed 'Basire Sc.' (foldout map, at p. 44). PAGE SIZE: 181 x 121mm.

VERY SCARCE. First collected edition, edited by Thomas Cadell, with additional notes supplied by Hamilton, of papers first published in Philosophical Transactions.

Hamilton was elected FRS in 1766, and these papers were the first published the results of his extensive studies on volcanoes - he climbed Vesuvius at least twenty-two times. These detailed reports were important in the development of "vulcanism" (Porter Earth Sciences 5-14). His great colour plate book of views of volcanoes, *Campi phlegraei*, was not published until 1776.

REFERENCES: LKG: XIV 604.

2073. German transl., 1773: Beobachtungen über den Vesuv, den Aetna und andere Vulkane, in einer Reihe von Briefen an die königl. grossbr. Gesellschaft der Wissenschaften, von seiner excellenz Sir Wilhelm Hamilton ... nebst neuen erläuternden Anmerkungen des Herrn Verfassers ... Aus dem Englischen. Berlin, Haude und Spener, 1773.

8°: [1], 196 p., [2], plates, folding map.

VERY SCARCE. LKG: XIV 605a. First German edition, translated from *Observations on Mount Vesuvius, Mount Etna, and other Volcanos* (1772).

REFERENCES: LKG: XIV 605a.

2074. — English & French, 1776 [First edition].

Campi Phlegraei. | [rule] | Observations On The Volcanos Of The Two Sicilies | As They Have Been Communicated To The Royal Society | Of London | By | Sir William Hamilton | K.B.F.R.S. |

HAMILTON

His Britannic Majesty's Envoy Extraordinary, And Plenipotentiary | At The Court Of Naples. | To which, in Order to convey the most precise idea of each remark, a new and | accurate Map is annexed, with 54 plates illuminated, from Drawings taken | and colour'd after Nature, under the inspection of the Author, | by the Editor Mr. Peter Fabris. | Naples MDCCLXXVI. | [ornate rule] | Observations sur les volcans des deux Siciles | telles qu'elle on été communiquées à la Societé Royale | de Londres | par La | Chevalier Hamilton | Chevalier de l'Ordre du Bain, Envoye Extraordinaire et Plenipotentiaire de sa Majeste Britannique à la Cour de Naples, | et Membre de la Societe Royale de Londres | auxquelles pour donner une idée plus precise de chaque Observation on a ajouté une Carte | nouvelle & tres excite avec 54 planches enluminées d'après les Desseins faits | & Colories sur la nature même, sous l'Inspection de l'Auteur, | par l'Editeur le Sieur Pierre Fabris | Naples. | MDCCLXXVI.

Text and atlas. [Text] 2°: 90, [2] p., double page map; [Atlas] 2°: 53 colored plates, 54 ℓ . Text is in English and French in parallel column throughout. PAGE SIZE: 460 x 328 mm.

CONTENTS: [Text] [2 pgs], Title page, verso blank.; [Plate I. Engraved and pictured title page.]; [2 pgs], Explanation to preceeding plate, verso blank.; [Double page folding map.]; 3-13, Dedication to Sir John Pringel.; 14-90, "Observations on Mount Vesuvius."; [1 pg], Text in Latin.; [1 pg], Blank.

[Atlas] [2 pgs], Title page, verso blank.; plates II-LIIII, with one leave of explanatory text interspersed between the plates.

PLATES: The plates are colored and printed on toned paper to appear like original drawings. No descriptions appear on the plates. This is supplied by the leave of explanatory text in both French and English that accompanies each plate. Plate I is bound in after the title page, all others are at the end of the volume.

Descriptions for the following list of plates was taken from the explanatory letter press that accompanies each plate.

[I. Engraved and pictured title page, showing 6 small views with the words "Societati Regiae Londini Gulielmus Hamilton Baln- [sic] Ord-Eques-D.D.D.CIIsCCLXXVI."]. II. [Six plans of the Top of Mount Vesuvius]. III. [View of Naples taken from Pausilipo]. IV. [View of Naples from the Sea Shore]. V. [View of eruption of Lava from the Crater of Mt. Vesuvius]. VI. [View of the Great Eruption of Vesuvius from the Mole of Naples]. VII. [View of Mount Vesuvius from the Sea shore at Resina]. VIII. [Representation of a thick stratum of Lava]. IX. [Interior View of the Crater of Mount Vesuvius before the Great Eruption].

X. [Interior View of the Crater of Mount Vesuvius before the Great Eruption]. XI. [View of Mont S. Angelo]. XII. [View of an eruption 23 December 1760]. XIII. [View of the state of the Little Mountains raised by the explosion of 1760]. XIV. [View of the Crater or inside on the cone of the Little Mountain]. XV. [Section of part of the Cone of the Mountain of Somma]. XVI. [Entrance of the Grotta of Pausilipo]. XVII. [Bird's eye views from the convent of Camaldoli]. XVIII. [The Lake of Agnano]. XIX. [View of a section of a cone of Astruni].

XX. [View into the Crater of Astruni]. XXI. [View of the hot spring called the Pisciarelli]. XXII. [View of the Porto Pavone]. XXIII. [View of part of the outside of the cone of the Solfaterra]. XXIV. [View of Puzzoli]. XXV. [View of the Solfaterra]. XXVI. [Entrance of the Grotta of Pausilipo]. XXVII. [View taken from the bottom of the Crater of Monte Nuovo]. XXVIII. [View taken from the top of Monte Gauro]. XXIX. [View of the Lake Avernus].

XXX. [View of the island of Ischia]. XXXI. [A bird's eye view of the territory raised by Volcanick Explosions]. XXXII. [View of part of the island of Ischia called Lasco]. XXXIII. [View in the Valley called Atrio di Cavallo]. XXXIV. [View from the Sea of ... Capo'dell' Arco in Island of Ventotiene]. XXXV. [View of part of the inside of the Cone of the mountain of Somma]. XXXVI. [View of Mount Etna from Catania]. XXXVII. [View of the island of Stomboli]. XXXVIII. [Night view of a current Lava]. XXXIX. [Interior view of ... Fossa Grande].

XXXX. [View of a hollow road leading from the Grotta of Pausilipo]. XXXXI. [View of the first discovery of the temples of Isis at Pompeii]. XXXXII. [Specimens of Tufas]. XXXXIII. [Specimens of curious volcanic matter]. XXXXIV. [6 pieces of lava]. XXXXV. [7 pieces of Tufa]. XXXXVI. [7 pieces of volcanic matter]. XXXXVII. [Piece of Marble and calcarious stone]. XXXXVIII. [9 Specimens of curious stones]. XXXXIX. [12 Specimens of Lavas].

L. [12 Specimens of marble and other mixed stones]. LI. [Lava Scoriae and Pumice stones]. LII. [Vitrifications and other Volcanick productions]. LIII. [Productions of the Solfaterra].

LIV. [Stones of Crystal commonly called Gems of Mount Vesuvius].

RARE. A monumentally beautiful work, highly prized for its beautiful plates showing panoramas of Italian volcanoes, as well as minerals found around volcanoes. Text is in parallel columns of English and French.

Also on view are striking hand-colored etchings by Pietro Fabris that depict the eruptions of Mount Vesuvius and the fiery fields of the Campi Phlegraei. In The Eruption of Mount Vesuvius on August 9, 1779, Fabris dramatically records the spectacular views that drew 18th-century travelers to the region to sketch and to collect rocks, shells, and antique fragments found on the path of the flowing lava.

This huge tome describes volcanic areas around Pozzuoli to the west of Naples, Vesuvius, islands in the Bay and Mount Etna in Sicily. Campi Phlegraei was expensive to produce but provided clear, precise, more useful and much more detailed explanations of volcanic activity than had previously been published, and included Sir William Hamilton's own theories that volcanoes were creative rather than destructive forces. Published in both Italy and England it sold widely throughout Europe and was hailed as a masterpiece.

Sir William Hamilton, the diplomat and archaeologist, served as British envoy to the court of Naples from 1764-1800. It was at the end of his second year of residence in Naples that Vesuvius began a series of great volcanic eruptions, all of which he witnessed, in 1767, 1779 and 1794. He produced several treatises on earthquakes and volcanoes, including these observations on Vesuvius and Etna, published in 1776. The text - the first major contribution on volcanology since the Renaissance - is Hamilton's own, while the fifty-four hand-coloured plates which describe the activity of the

volcanoes are the work of Pietro Fabris. A spectacular night view of the eruption of Vesuvius on 11 May 1771 is shown here, the lava forming a beautiful cascade of fire; Hamilton is depicted drawing the original in the lower left corner. Knighted in 1772, Hamilton was a notable collector. He aided his friend, William Hunter, the original owner of this volume, in acquiring coins and medals from Italy. He was also the husband of Emma, Lady Hamilton, the mistress of Admiral Horatio Nelson.

Fabris was the sole distributor of the work, which was originally published at 60 Neapolitan ducats for Part I and Part II; the price of the Supplement is not recorded. Jenkins and Sloan state that 'some copies have bodycolour and gum arabic added to the etchings, perhaps indicating that they were de luxe versions'. Brunet III, 31 ('Ouvrage curieux et bien exécuté'); I. Jenkins and K. Sloan - Vases and Volcanoes (London: 1996), 'Catalogue' 43.

Reprint, 1962: *Campi Phlegraei. Osservazioni sui vulcani delle Due Sicilie comunicate alla Reale Società di Londra da Sir William Hamilton. Illustrate con tavole di Pietro Fabris.* A cura di G. Doria. Polifilo, Milano, 1962. 2°: [4], 146 p., 24 color plates. Limited reprint edition of Hamilton's famous *Campi Phlegraei*.

Italian translation, 2000: *Campi Flegrei : osservazioni sui vulcani delle Due Sicilie.* Prima traduzione italiana a cura di Antonio Tommaselli. Introduzione di Carlo Knight. Napoli, Grimaldi, 2000. 254 p., [54, 5] leaves of plates. Illustrative matter consists of reproductions of the 54 colored plates from the English edition of 1776, and 5 from the account of the eruption of Vesuvius in 1779, all by Peter [i.e., Pietro] Fabris. Includes reproduction of the original title pages. Text translated from: *Campi Phlegraei; observations on the volcanoes of the Two Sicilies as they have been communicated to the Royal Society of London / Sir William Hamilton.* Naples, 1776, and Supplement to the *Campi Phlegraei*, being an account of the great eruption of Mt. Vesuvius in the month of August, 1779. Naples, 1779.

REFERENCES: *Freilich Sale Catalog*: no. 221 ["Magnificent binding"]. • LKG: XIV 606b. • Tooley, *English Books*, 1973: 435-7.

2075. Supplement, 1779: Supplement to the *Campi Phlegraei* being an account of the great eruption of Mount Vesuvius in the month of August 1779 communicated to the Royal Society of London by Sir William Hamilton K.B.F.R.S. His Britannic Majesty's Envoy Extraordinary, and Plenipotentiary at the Court of Naples to which are annexed 5 Plates illuminated from Drawings [sic] taken, and colour'd after nature under the inspection of the Author by the Editor Mr. Peter Fabris, Naples 1779 [ornate rule] Supplement au *Campi Phlegraei* ou Relation de la Grande Eruption du Mont Vesuve au mois de Mai [sic] 1779 communiquée à la Société Royale de Londres par le chevalier Hamilton Chevalier de l'Ordre du Bain, Envoye extraordinaire, et plenipotentiaire de sa majeste Britannique à la Cour de Naples, et membre de la Société Royale de Londres. A la queue on a ajouté 5 Planches enluminees d'après les Dessains fan's, & coloriés d'après nature sous l'inspection de l'Auteur par l'Editeur le Sieur Pierre Fabris Naples 1779

2°: [2], 29, [3] p., 5ℓ., 5 hand-colored plates.

CONTENTS: Tooley (1973) gives: [2 pgs], Title page, verso blank.; [Plate I being the engraved title page].; [2 pgs], Explanation of the preceeding plate.; [1]-28, Text.; [Plates II-V, with one leave of explanatory text interspersed among the plates].

PLATES: Each plate is accompanied by one leave of explanatory text. Plate I follows the title page, all others are bound at the end of the volume. Descriptions for the

following list of plates was taken from the explanatory letter press that accompanies each plate.

[I. Engraved and pictured title, showing 6 small views with the words Societati Regiae Londini Gulielmus Hamilton Bain-Ord Eques D.D.D.CI9CCLXXIX]. II. [View of the great eruption of Mount Vesuvius, August 8, 1779]. III. [View of the great eruption of Mount Vesuvius, August 9, 1779]. IV. [Fragments of very curious vitrified matter]. V. [Fragments of new lava].

VERY RARE. Supplement to the original *Campi Phlegraei* describing the eruption of Vesuvius in August, 1779.

REFERENCES: LKG: XIV 606b. • Tooley, *English Books*, 1973: 437.

2076. 2nd edition, 1799-1802: *Campi Phlegraei, ou, Observations sur les volcans des Deux Siciles.* Paris, [1799].

2°: ??, title page vignette, 120 plates (some folding). Each plate is in two states, plain and colored. VERY SCARCE.

2077. — German, 1787.

Bericht vom gegenwärtigen Zustande des Vesuvs, und Beschreibung einer Reise in die Provinz Abruzzo und nach der Insel Ponza. Dresden, Walther, 1787.

8°: 28 p., title vignette.

VERY SCARCE. LKG: XIV 610f. First German edition, translated by K.S. Walther. Originally published in the *Philosophical Transactions* for 1786.

REFERENCES: LKG: XIV 610f.

2078. — German, 1784 [German transl.].

Neuere Beobachtungen über die Vulkane Italiens und am Rhein, in Briefen von Sir Wilhelm Hamilton ... nebst merkwürdigen Bemerkungen des Abts Giraud Soulavie ... Aus dem französischen zum erstenmal übersetzt von G.A.R. ... Mit einer neuen karte. Frankfurt und Leipzig, bey C. Weigel und A.G. Schneider, 1784.

8°: xvi, 214 p., [8], folding map.

VERY SCARCE. LKG: XIV 608d. Not in BLC. First German edition, translated by G.A.R.

REFERENCES: LKG: XIV 608d.

2079. — English, 1783.

An Account of the Earthquakes which happened in Italy, from February to May 1783. Read at the Royal Society, July 3, 1783. London: Printed by J. Nichols, 1783.

4°: 48 p.

VERY SCARCE. Not in BLC. First edition.

REFERENCES: LKG: XIV 694b*.

2080. — French, 1783.

Détails historiques sur les tremblemens de terre arrivés en Italie depuis le 5 Février jusqu'en Mai, 1783 par le Chevalier d'Hamilton et le Marquis Hippolyte. Traduit par M. Lefebvre de Villebrune. Paris: T. Barreis le jeune, 1783.

8°:

VERY SCARCE. LKG: XIV 694b*. Not in BLC. First French edition, translated by Lefebvre de Villebrune.

HAMLIN

REFERENCES: LKG: XIV 694b*.

2081. — German, 1783.

Bachricht von dem lezten Erdbeben in Kalabrien und Sizilien. Aus dem Englischen von A. Wittenberg. Altenburg, 1783.

8°:

VERY SCARCE. LKG: XIV 693. Not in NUC or BLC. First German edition, translated by A. Wittenberg. Originally published in the *Philosophical Transactions* for 1783.

REFERENCES: LKG: XIV 693.

2082. — English, 1787.

An Account of the Earthquakes in Calabria, Sicily, &c. ... Colchester, 1787.

8°: iii, 35 p..

VERY SCARCE. First Edition. Probably a offprint of an article from the *Philosophical Transactions*.

REFERENCES: LKG: XIV 694.

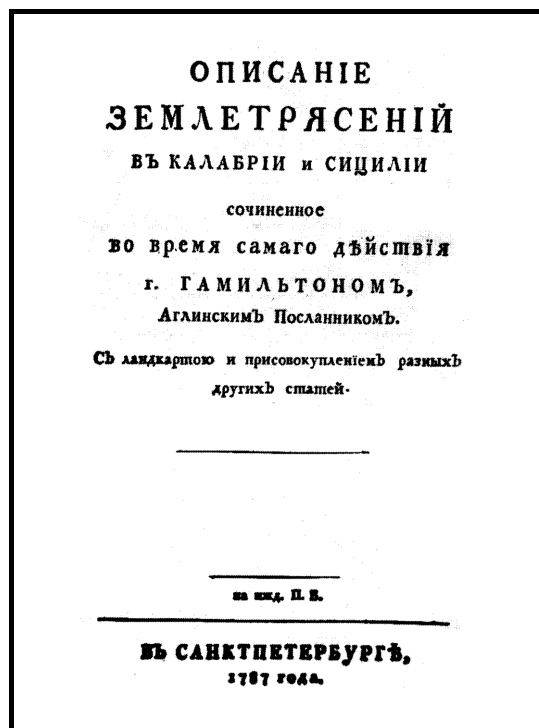
2083. — French, 1784.

Relation des derniers tremblemens de Terre arrives en Calabre et en Sicile ... Traduite de l'anglois et enrichie de notes traduitee de l'Italian du G. Sella. Geneve: P. Barde, 1784.

8°: 76 p.

VERY SCARCE. LKG: XIV 694. First French edition, translated by G. Sella.

REFERENCES: LKG: XIV 694.



OPISANIE, 1787

2084. — Russian, 1787 [Russian transl.].

Russian Translation. St. Petersburg, 1787.

8°:

VERY RARE. Translation of ??????? (London, 1783).

REFERENCES: Schmidt, Peter. "Gedanken zum Umbruch in der europäischen Seismologie während des 18. Jahrhunderts", *Zeitschrift für geologische Wissenschaften*, 8 (1980), no. 2, 189-206. [History of European seismology in the 18th century.].

2085. — Italian, 1778.

Lettera sul monte Volture a G. Hamilton del Domenico Tata. Napoli, 1778.

8°:

VERY SCARCE. LKG: XIV 553. Not in NUC or BLC. First edition[?]. No information found.

REFERENCES: LKG: XIV 553.

2086. German transl., 1786: Des Ritters Hamilton Bemerkungen auf einer Reise nach der Insel Ponza. Aus dem Englischen. Dresden, 1786.

8°:

VERY SCARCE. LKG: XIV 609e. Not in NUC or BLC. First German edition. Translation of a paper that originally appeared in the *Philosophical Transactions*.

REFERENCES: LKG: XIV 609e.

HAMLIN, Augustus Choate. (BORN: 28 August 1828; DIED: 1905) *American physician & businessman.*

Hamlin – also known as A. C. Hamlin – of Bangor, Penobscot County, Maine. Son of Elijah L. Hamlin. Born in Columbia, Washington County, Maine, 1829. Republican. Mayor of Bangor, Maine, 1877-78. Died in Bangor, Penobscot County, Maine, November 18, 1905. Interment at Mt. Hope Cemetery, Bangor, Maine.

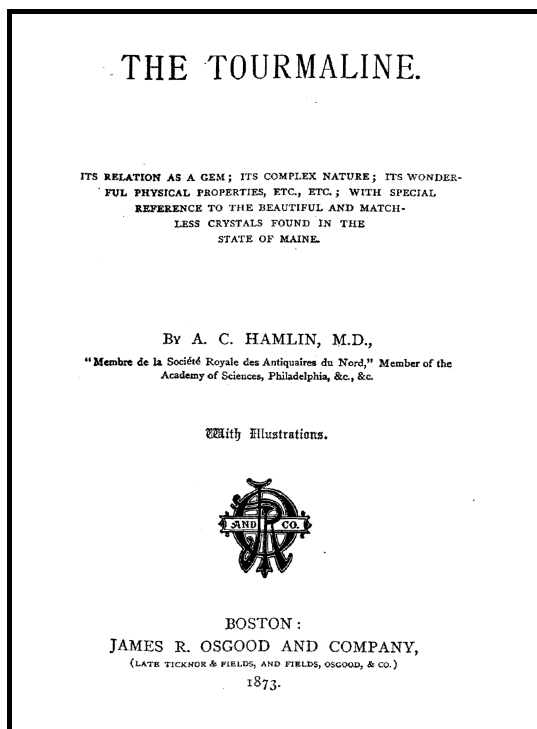
"Dr. A. C. Hamlin. - Dr. Augustus C. Hamlin, of Bangor, Surgeon-General of Maine, on the staff of Gov. Robie, is one of the most distinguished medical officers in New England. He served in the army during the entire war. He was entrusted with important commands in the Army of the Potomac, as Medical Director, and in the Army of Western Virginia. He was afterward promoted to one of the highest positions, that of Medical Inspector, in the staff of the regular army; and served with distinction in the Army of the South during the famous siege of Fort Wagner, and was afterwards assigned to the armies of the Southwest under the command of Major General [Henry] Thomas. Dr. Hamlin is a man of high scientific attainments, and is a member of numerous scientific societies, both at home and abroad. - N. Y. Medical Record."

REFERENCES: ABA: I 687, 14-21, 77-81. • Adams, *Dictionary of American Authors*, 1904. • Andrews, *Hamlin Family*, 1902. • Appleton *Cyclopedia of American Biography*. • Herringshaw's *National Library of American Biography*. • WBI. • *Who Was Who in America*.

2087. — English, 1873.

The Tourmaline. | Its Relation As A Gem; Its Complex Nature; Its Wonder- | ful Physical Properties, Etc., Etc.; With Special | Reference To The Beautiful And Match- | less Crystals Found In The | State Of Maine. | By A.C. Hamlin, M.D. | [...2 lines of titles and memberships...] | With Illustrations. | [ornament] | Boston: | James R. Osgood And Company, | (Late Ticknor & Fields, And Fields, Osgood, & Co.) | 1873.

8°: 107 p., 4 chromo-lithographic plates.



THE TOURMALINE, 1873

VERY SCARCE. Chapter I. History of Tourmaline – Its Discovery, and the Derivation of its name (pp. 13-22). Chapter II. Localities and Peculiarities of Deposition and Distribution (pp. 25-35). Chapter III. Description of Mt. Mica and Its Mineral Treasures (pp. 36-74). Chapter IV. The Physical Wonders of the Tourmaline – Its Electrical Properties – Its Optical Phenomena – Its Play of Color, Compared with other Gems (pp. 75-101). Origin of Precious Stones (pp. 102-107). The four plates figuring specimens of Maine tourmaline are excellent productions.

REFERENCES: *Freilich Sale Catalog*; no. 223. • McGrath, D.F., *American Colorplate Books, 1800-1900. A dissertation submitted to the University of Michigan*, 1966: p. 134. • NUC. • Sinkankas, *Gemology Bibliography*, 1993: no. 2694.

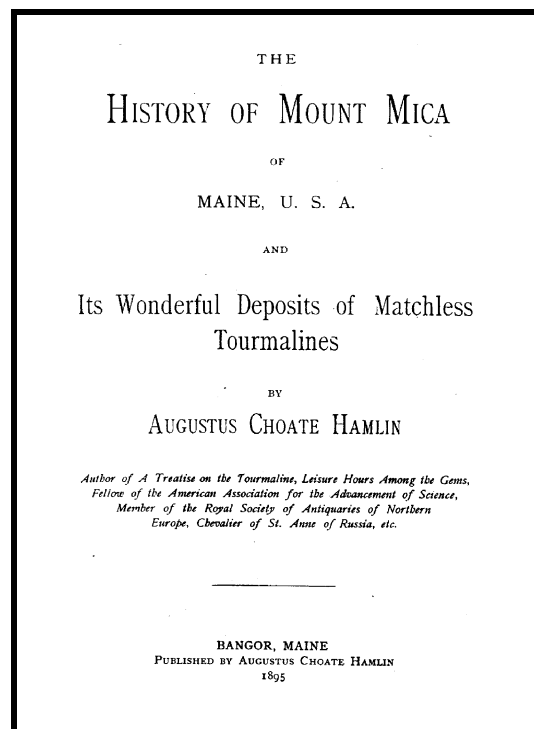
2088. — English, 1891 [Second edition]. *Leisure Hours Among | The Gems | By | Augustus C. Hamlin | [...4 lines of titles and memberships...] | [...6 lines of quotation, signed Rabelais...] | Boston And New York | Houghton, Mifflin And Company | The University Press, Cambridge | 1891.*

12°: extra blank flyleaf supplied + [10], [13]-439 p., 2 chromolithographic plates.

VERY SCARCE. A leisure tour of information about various gemstones including the diamond, the emerald, the opal and the sapphire. Written in Hamlin's easy style myths, lore and scientific data associated with the stones is provided in the text about, and it is clear that Hamlin was acquainted with early

gemological books as they are cited within the text. The two chromolithographic plates are crude, especially in comparison with the author's other two works. They depict the Russian Imperial Crown of Empress and a doubly terminated blue sapphire from Ceylon that was held in the author's collection. According to Sinkankas (1993) the chapter on the emerald was reprinted in *Mineral Digest Magazine*, New York, 3, (Summer 1973), pp. 17-32, 7 color figs.

REFERENCES: NUC: ??, ??. • Sinkankas, *Gemology Bibliography*, 1993: no. 2696.



HISTORY OF MOUNT MICA, 1895

2089. — English, 1895.

The | History of Mount Mica | Of | Maine, U.S.A. | And | Its Wonderful Deposits of Matchless | Tourmalines | By | Augustus Choate Hamlin | [...4 lines of titles and memberships...] | [rule] | Bangor, Maine | Published by Augustus Choate Hamlin | 1895.

8°: [2], 72 p., 51 plates (43 chromo-lithographies), 4 illus.

VERY SCARCE. This privately published volume chronicles the history of an important, early American gemstone locality. Beginning with a chapter on the discovery of Mount Mica, the book continues with stories of other explorations, a description of the deposit, and diagrams showing where the major pockets were found. Of particular interest are the finely executed plates, showing various tourmaline crystals

collected over the years. These plates are among the best chromo-lithographes of minerals ever produced in the United States.

REFERENCES: *Freilich Sale Catalog*: no. 224. • NUC. •
Sinkankas, Gemology Bibliography, 1993: no. ??.



THESAURUS EXOTICORUM, 1688

HAPPEL, Eberhard Werner. (BORN: 1647; DIED: Hamburg, Germany, 1690) *German historian & author.*

REFERENCES: ADB. • DBA: I 472, 38-51; II 522, 356. • Happel, E.W., *Lebensbeschreibung des Eberhard Werner Happel (1647-1690) aus dem Roman "Der Teutsche Carl"*. Kommentiert von Gustav Könnecke (1908) mit einem Nachwort von Gerd Meyer. Marburg, Kreissparkasse Marburg/Lahn und der Stadt Kirchhain, 1990. 107 p., portrait.. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • NDB. • WBI.

2090. — German, 1688.

[In red:] Thesaurus Exoticorum. | [in black:] Oder
eine mit Außlündichen | [in red:] Raritäten und
Geschichten | [in black:] Wohlversehene | [Line in
red except for “S” and “K” which are in black:] Schatz-
Kamer | [in black:] Fürstellend | die Asiatische,
Africanische und | Americanisehe | [in red:]
Nationes | [in black:] der Perser/ Indianer/ Sinesen/
Tartarn/ | Egypter/ Barbarn/ Libyer/ Nigriten/
Guineer/ Hottentotten/ | Abyssiner/ Canadenser/
Virgenier/ Floridaner/ Mexicaner/ Peruaner/ |
Chilenser/ Magellanier und Brasilianer etc. Nach

ihren Königreichen/ | Polliceyen, Kleydungen/ Sitten und Gottes=Dienst. | Darauff folget eine Umständliche | [in red:] Beschreibung von Túrckey: | [in black:] Der Túrcken Ankunfft; aller Sultanen Lebens-Lauff und Bildnúß ; Aller hohen | Staats=Bedienten; Des Sultans Hoff/ Regierung/ Intradén/ Macht und | Vasallen; Wie auch ihres Propheten Mahomets Lebens Beschreibung/ und sein | [in red:] Verfluchtes Gesetz=Buch oder Alkoran. | [in black:] Alssdann eine Kúrtzbündige | [in red:] Beschreibung von Ungarn: | Nach seiner Grösse/ Fruchtbarkeit/ Macht/ Stádtén und vielen Vestungen | von Wien biß nach Constantinopel hinaus. | [in black:] Da es dann Gelegenheit gibt zu Reden | Von den 4 Monarhien/ der Assyren/ Perser/ Griechen und Römer: Aller | Káysern/ von Nimrod an biß auff den grossen Leopoldum, und so dann | von allen Hertzogen und Königen von Ungarn sampt ihren Bildnússen. | Hiernechst eine umbständliche Beschreibung des Lebens=Lauffs | [in red:] Ihrer Káyserl. Mayest. Leopoldi I. | Und des itzo annoch wehrenden bluthigen Túrcken=Krieges, und was in demelben | Denckwürdiges in Ungarn/ Pohlen und Morea passiret. | [in black:] Alles mit grosser Mühe und Fleiß aus den berühmtesten Srienten zusammen | getragen/ mit schönen Kupfern und Landarten/ auch andern Figuren in sehr grosser | Anzahl aussgezieret/ und denen Liebhabern zur Ergetzlichkeit heraussgegeben | [in red:] Von Everhardo Gvernero Happelio. | [in black, rule] | Hamburg, | Gedruckt und Verlegt durch Thomas von Wiering, Buchdrucker und Formschueider | bey der Bórse; im Gúlden A.B.C. Im Jahr 1688. | Sind auch zu bekommen in Franckfurth bey Zacharias Herrein.

5 parts. [Part 1] 2°: [18], 120 p. [Part 2] 2°: [2], 160 p. [Part 3] 2°: [2], 192 p. [Part 4] 2°: [2], 288 p. [Part 5] 2°: [4], 115 p. With 31 plates and c300 large text woodcuts by H. von Wiering and Melchior Lorch.
PAGE SIZE: 330 x 210 mm.

VERY RARE. A general history and description of the world, with special reference to the Turkish and Austrian dominions, and including a German version of the Koran. Sabin calls it "a sort of German Coryat" filled with a history of the wars between Hungary and Turkey. Particularly interesting are the notices of America (New France, Virginia, Florida, Mexico, Peru, Brazil, etc.) with a long report on the discoveries made by Drake in California. It has a series of curious representations of American natives, with detailed descriptions of their manners, customs, religion, etc. The work is heavily illustrated with some woodcuts nearly full page. A detailed description of

Hungary is richly illustrated with engraved plates. It is not clear if this work has any connection to mineralogy, but it is listed in Gatterer's bibliography.

The greater part of this work, which is a sort of German Coryat, is filled with a history of the wars between Hungary and Turkey, but it has also a special interest for the American collector, as it contains a series of fifteen curious representations of the aborigines of America, all with detailed descriptions of their manners, customs, religion, etc. We find among them representations of the natives of New-France, New-Nether-land, Virginia, a King of Florida, Californians, Peruvians, Chilians, Mexicans, etc. — *Sabin*

REFERENCES: BL: [793.m.9]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 259. • Sabin, *Dictionary*, 1868-1936: no. 30279. • Taeuber & Weil, *Bookseller*: cat. 25, no. 69. • Wilson, *History of Mineral Collecting*, 1994: 174 & 213.

HARIOT, Thomas. (BORN: Oxford, England, 1560; DIED: London, England, 1621) *English explorer, navigational expert, mathematician, scientist & astronomer.*

Hariot was tutor to Sir Walter Raleigh, who sent him in 1585 to Virginia as surveyor with Sir Richard Grenville. Returning to England, Hariot wrote *A Brief and True Report of the New Found Land of Virginia* (1588), one of the earliest known large-scale statistical surveys. He made valuable contributions to algebra, introducing new symbols and notation. His *Artis analyticae praxis* appeared in 1631.

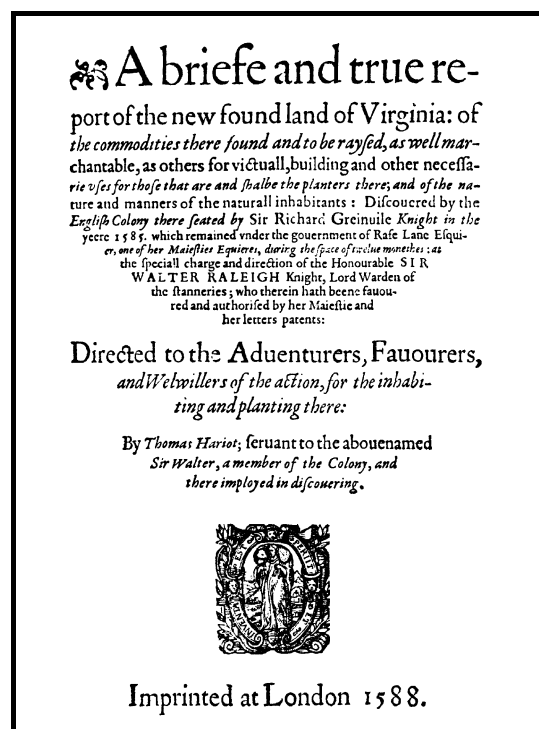
for victuall, building and other necessa- | rie vses for those that are and shalbe the planters there; and of the na- | ture and manners of the naturall inhabitants: Discoucred by the English Colony there seated by Sir Richard Greinuile Knight in the | yeere 1585. which remained vnder the gouernment of Rafe Lane Esqui- | er, one of her Maiesties Equiere, during the space of twelve monethes: at | the speciall charge and direction of the Honourable Sir | Walter Raleigh Knight, Lord Warden of | the stanneries; who therein hath beene fauou- | red and authorised by her Maiestie and | her letters patents: | Directed to the Aduenturers, Fauourers, | and Welwishers of the action, for the inhabi- | ting and planting there: | By Thomas Hariot; seruunt to the abouenamed | Sir Walter, a member of the Colony, and | there imployed in discouering. | [ornament] | Imprinted at London 1588.

4°: A-D⁴ E³; 19ℓ.; no pagination. Ornamental device (A1v).

CONTENTS: A1r, Title page.; A1v, Ornamental device incorporating the phrase "A More Et Virtue."; A2r-A2v, "Rase Lane on her Maiesties." (=preface).; A3r-E3v, Text.

EXTREMELY RARE. The science of North America began with Thomas Hariot and his *Brief and True Report of the New Found Land of Virginia*, a thin volume in quarto, printed at London in 1588. This narrative appeared in the English market in an attempt to entice others to emigrate to the recently founded colony of Roanoke in the Virginia colony. It is now one of the rarest and most precious works relating to America and is full of interest to the naturalist. Hariot's description of the Indians and their customs and beliefs, though strongly tintured with prepossessed ideas concerning them, is thorough and scholarly, and one of the fullest and most reliable of the early treatises upon the inhabitants of North America. In addition, Hariot gives a good description of the natural history of the territory surrounding the colony, included are descriptions of the plants, roots, berries, fish, animals and minerals that were readily available to the colonists. Among the mineral substances described are pyrite, clay, slate, pearls, and iron and copper ores. These are the earliest printed descriptions about mineralogical items found on the North American continent.

Hariot's Report is an abstract of a now-lost Chronicle written while he lived in Virginia in 1585-6. Although in the Report Hariot states his intent to publish the full Chronicle at a later date, it was never printed. The first edition of *A Briefe and True Report* was published in quarto in 1588. It does not appear in the Stationers' Register, nor does any printer's name or mark appear in the text. However, Randolph Adams identifies the printer's device on the title page as belonging to London printer Robert Robinson. There is no record of how many copies of the 1588 edition were printed, but the run is assumed to be small. The book



A BRIEF AND TRUE REPORT, 1588

2091. — English, 1588 [First edition].

A briefe and true re- | port of the new found land of Virginia: of the commodities there found and to be rayfed, as well mar- | chantable, as others

HARIOT

was intended for limited circulation among the wealthy to persuade them to invest in Sir Walter Raleigh's attempt to establish a permanent colony in the new world. Only six copies of the 1588 edition are known to survive.

Facsimile reprint, 1903: *A Briefe and True Report of the New Found Land of Virginia By Thomas Hariot Reproduced in Facsimile from the First Edition of 1588.* New York, Dodd, Mead & Co., 1903. 48 pp. (unpaginated). With an introduction by Luther S. Livingston, this edition was limited to 520 copies.

Facsimile reprint, 1951: *A Brief and True Report of the New Found Land of Virginia.* New York, The History Book Club, 1951. 12°: xvii, [3], [49] p.

A facsimile edition of the 1588 Quarto, with an introduction by the Randolph G. Adams. Cartographic paper over boards, boxed.

REFERENCES: Brunet. • NUC. • Sabin, *Dictionary*, 1868-1936: no. 30377.



A BRIEF AND TRUE REPORT, 1590

2092. 2nd edition, 1590: [Contained within an elaborate engraved device containing two compartments, the text in the first compartment reads:] A brief and true report | of the new found land of Virginia | of the commodities and of the nature and man | ners of the naturall inhabitant Discovered by | the English colony there seated by Sir Richard | Greinuile Knight in the yeere 1585. Which rema | zined vnder gourernment of twelve moneths. | At the special charge and direction of the Honou | rable Sir Walter Raleigh Knight lord Warden | of the stanniers Who therein hath bene faouored | and authorised by her Maiestie | and her letters patents: | This fore booke is made in English | By Thomas Hariot seruanto to the abouenamed | Sir Walter, a member of the Colony, and there | employed in discourring | Cvm Gratia Et Privilegio Cæsma^{tr}s Specia^{lt} | [Continued in the second compartment:]

Francforti ad Moenvm | Typis Ioannis Wecheli, Svmtibus Vero Theodri | De Bry Anno CD D XC. | Venales Reperivntvr In Officina Sigismvnde Feir Abendii.

3 parts. 2°: (33, [1] p., [1] leaf of plates ; [6] p., [23] leaves of plates (some fold.) ; [8] leaves, [5] leaves of plates) : ill., map. Engraved title-page.

CONTENTS: [Part 1] [1-2], Title page, verso blank.; [3]-4, "To The Right | Worthie An Honov- | rable, Sir Vvalter Raleigh, | ..." (page shows an engraved coat of arms)—signed Theodorvs de Bry, April 1590.; 5-6, "To The Adven- | turers, Favorers, And | Vvelvvillers Of The En- | terprise For the Inhabitting." (=preface).; 7-33, Text, dated with printer's device on page 33, February 1588.; [1 pg], Blank.

[Part 2] [2 pgs], Title page, verso blank.; [2 pgs], "The Table | Of All De Pictv- | res Contained In | this Booke of Virginia. (=lists 23 plates).; [1 pg], "To the gentle Reader.;" [1 pg], Blank.

[Part 3] [2 pgs], Title page, verso "The trvve picture of one | Pict. I.;" [12 pgs], Text printed on reverse side of the plates.; [3 pgs], "A Table" (=index).; [1 pg], Errata.; [1 pg], "At Franckfort. | Inprinted By Ihon We- | chel, at Theodore de Bry, owne | cost and charges. | M D XC."

VERY RARE. The folio edition of 1590 was published simultaneously in English, French, German and Latin by Theodore de Bry, as part of his series on America. De Bry added a series of engravings based on watercolors by John White, a member of the 1585 colony and governor of the 1587 colony. Additional commentary about the natives, probably written by DeBry or White, accompanies the engravings.

Plates 1-23 have title: The true pictures and fashions of the people in that parte of America now called Virginia, discovred by Englishmen sent thither in the years of Our Lorde 1585 ... Translated out of Latin into English by Richard Hackluit. Diligentlye collected and draowne by Ihon White ... now cutt in copper and first published by Theodore de Bry ...

The last 5 plates have title: Som picture, of the Pictes which in the olde tyme dyd habite, one part of the great Britainne ...

"Also pub'd in French, Latin, and German, the latter 2 forming pt. 1 of de Bry's America series in those languages"—STC (2nd ed.)

REFERENCES: STC: no. 12786.

2093. German transl., 1st edition, 1590: Wunderbarliche, doch warhafftige Erklärung, von der Gelegenheit vnd Sitten der Wilden in Virginia ... Erstlich in engelländischer Sprach beschriben durch Thomam Hariot, vnd newlich durch Christ. P. in Teutsch gebracht. Franckfort am Mayn, Gedruckt bey J. Wechel, in Verlegung D. Bry, 1590.

4°; 33, [89] p., 28 illus., folding map.

VERY SCARCE. Edited by Theodor de Bry [1528-1598].

2094. German transl., 2nd edition, 1600: Wunderbarlich doch warhafftige erklärung von der gelegenheit vnd sitten der wilden in Virginia welche newlich von den Engelländern so im jar 1585 vom Herrn Reichard Greinuile einem von der ritterschafft in gemeldte landtschafft die zu bewohn geführt waren ist erfunden worden in verlegung H Walter Raleigh ritter vnd obserten desz zinbergwercks ausz vergünstigung der duteleuchtigsten vnd vnvberwindlichsten Elisabeth königin in Engelland &c. Erstlich in engelländischer sprach beschriben durch Thomam Hariot vnd newlich durch Chirst. P. in teutsch gebracht. Jetz widerumb vbersehen vnd andermal in truck gegeben. Published : Gedruckt zu Frankfort am Mayn bey Matthes Becker in verlegung Dieterich de Bry seliger nachgelassene Wittwe vnd beyder söhne. 1600.

4°; A-G⁴ H⁶ I⁸ K⁶ [L]-[M]⁴ N³; 59l.; 31 p., 45l. including plates, double map. Engraved title page. Head and tail-piece.

VERY RARE. Translation by Christopher P— of *A briefe and true report of the new found land of Virginia* (London, 1588); the first edition of the German translation was published in 1590. Forms Part I of the

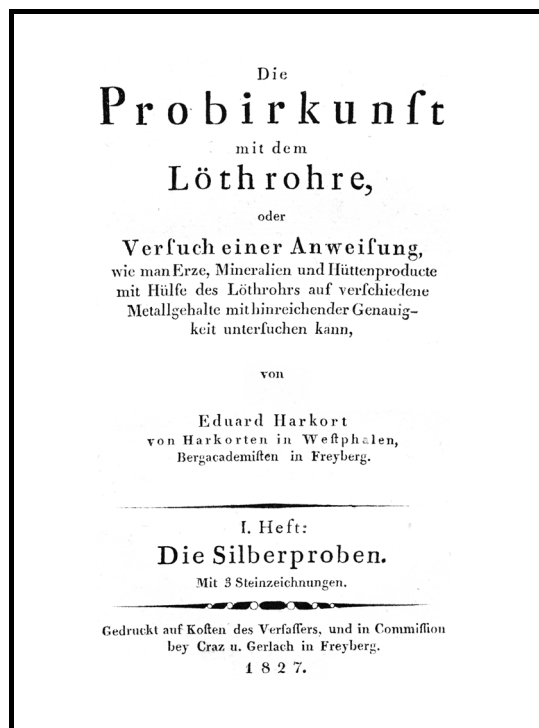
German edition of Theodore de Bry's collection of *Great voyages*. Illustrations engraved by de Bry from John White's drawings. Title-page for plates: Warhafftige Contrafacturen und Bebräuch der Inwohnern der jenigen Landschafft in America welche Virginia ist genennet worden von der Engelländern die auss Befelch dess Gestrengen Hernn Waltheri Raleigh ... Alles auss das aller fleissigst erkündigt vnd auff das artlichst Abcontrafeyt von Johann With ... Gedruckt zu Oppenheim bey Hieronymo Gallern, In Vorlegung Johann Theodor de Bry, anno 1619.

"Third edition. The title at the beginning is the second edition title." Imperfect: "Address to the Reader", between Plates I & II, missing. Plate XXIII, the *Étliche contrafeyt*, and the 5 plates with their explanations, occupying 9 leaves: missing."

HARKORT, Eduard. (BORN: 1797; DIED: August 1834 or 1835) *German geographer & mineralogist.*

Harkort entered the Freiberg Bergakademie in 1826, but in 1827 he emigrated to Mexico and probably became for several years the manager of the Santa Ana Smelter on the Rio Yavonio. The political turmoil swept him up however, and he joined the Mexican revolution in 1833, participating in the battles as Chief of the Corps of Engineers. Later he served as colonel of the artillery in the Texas army, dying of fever in Galveston.

REFERENCES: DBA: I 474, 172-173. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Harkort, E., *Aus mejicanischen Gefängnissen*. Bruchstück aus Eduard Harkorts hinterlassenen Papieren. Herausgegeben von F. Gustav Kühne. Leipzig, Carl B. Lorck, 1858. 116 p. [Translated, *In Mexican prisons: the journal of Eduard Harkort, 1832-1834*. Translated and edited by Louis E. Brister. College Station, Texas A&M University Press, c1986. xii, 194 p.]. • Poggendorff: 1, col. 1019 & 1572. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 3, 11-3. • WBI.



DIE PROBIRKUNST, 1827

2095. — German, 1827 [First edition].

Die | Probirkunst | mit dem | Löthrohre, |
oder | Versuch einer Anweisung, | wie man Erze,
Mineralien oder Hüttenprodukte | mit Hülfe des
Löthrohrs auf verschiedene | Metallgehalte mit
hinreichender Genauig- | keit untersuchen kann,
| von | Eduard Harkort | [...2 lines of titles and
memberships...] | [tapered rule] | 1. Heft: | Die
Silberproben. | Mit 3 Steinzeichnungen. | [ornate
rule] | Gedruckt auf Kosten des Verfassers, und in
Commission | bey Graz u. Gerlach in Freyberg. |
1827.

8°: x, 107 p., 3 diags.

RARE. Published at the expense of the author this single section dealing with blowpipe and assay tests for silver is all that appeared of a general work describing the assay art utilizing the blowpipe. In 1826 Harkort came to the Freiberg Bergakademie and was taught blowpipe analysis by JOHANN FRIEDRICH AUGUST BREITHAUP. He excelled at the work, developing a method of identifying potassium by blowpipe analysis in which the sample was mixed with nickel hydroxide and borax and fused. A characteristic blue coloration of the glass bead appeared in the presence of potassium.

In his *Die Probirkunst mit dem Löthrohre* he introduced quantitative analysis to blowpipe technique. Descriptions are given that provide procedures for testing the percentage of silver present in samples of minute size. In essence Harkort applies in miniature the ancient techniques that were used to test large quantities of silver ore in the muffle furnace. Unfortunately, no other sections of the book were published and innovations that Harkort might have brought to blowpipe art never appeared. However, he is credited with introducing the blowpipe assay scale as standard equipment.

REFERENCES: Burchard, *History of Blowpipe Analysis*, 1984. • Ferchl. • Personal communication: [Title page facsimile supplied by Adriana & Renato Pagano].

HARTMANN, Carl Friedrich Alexander. (BORN: Zorge near Walckenriedt, Harz, Germany, 8 January 1796; DIED: Leipzig, Germany, 3 August 1863) *German mineralogist, mining expert & metallurgist.*

Hartmann was the son of a foundry official in the Oberharz, a prolific mining/mineral district in Germany. From these roots, he developed an early interest in mining and metallurgy, and through family connections secured a position as a student at the mining school in Clausthal, Austria. Although his studies were interrupted from 1813 to 1816 by a stretch in the German army fighting Napoleon, he resumed his education afterward, becoming an assistant to CHRISTIAN SAMUEL WEISS at the University of Berlin. In 1821, while still a student, Hartmann entered into a marriage that he could not financially support; therefore, he was obligated to leave the University and accept a bookkeeping position in Brunswick to provide for his family. His discretion and conscientiousness often meant being entrusted with important assignments. However, all spare time away from work or family was devoted to private study in the areas of geology, mining and mineralogy. His publications and translations in these fields brought him recognition and opportunities to travel throughout Europe.

HARTMANN

They also brought an appointment as commissioner of mines for Brunswick in 1825. Hartmann held membership in many scientific and technical societies, including Societät für die Gesamte Mineralogie of Jena and the Society for Mineralogy in St. Petersburg.

REFERENCES: DBA: I 479, 165-167; II 528, 201-202. • *Der Bergeist*: 8 (1863), no. 103, 427-8. • DSB: 6, 142-3 [by M. Koch]. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, col. 1025 & 3, ?? . • Schenkenberg, *Die lebenden Mineralogen*, 1842: 44. • WBI.

2096. — German, 1825 [First edition].

Handwörterbuch der Mineralogie, Berg-, Hutten- und Salzwérkskunde, nebst der französischen Synonymie und einem französischen Register. Ilmenau, B.F. Voigt, 1825.

2 parts (bound in one). 8°: viii, [8], 872, [2] p.

VERY SCARCE. B.M.(Nat. Hist.)II, 793. Carl Friederich Alexander Hartmann was a prolific writer translating some 40 English and French works on mining and mineralogy into German. Apart from the present work his 'Taschenbuch für reisende Mineralogen' and 'Handwörterbuch der Mineralogie und Geognosie' are his most important contributions.

REFERENCES: Partsch, *Katalog der Bibliothek*, 1851: no. 138.

2097. — German, 1828 [First edition].

Handwörterbuch | der | Mineralogie und Geognosie. | [rule] | Bearbeitet und herausgegeben | von | Dr. Karl Friedrich Alexander Hartmann. | [rule] | Mit 10 lithographirten Tafeln. | [rule] | [rule] | Leipzig: | F.A. Brockhaus. | [rule] | 1828.

8°: ccvi, 2, 631, 2 p., 10 lithographic colored? plates.

VERY SCARCE. Mineralogy – dictionaries.

REFERENCES: Partsch, *Katalog der Bibliothek*, 1851: no. 137.

2098. 2nd edition, 1859-60: Handwörterbuch der Berg-, Hütten-, und Salzwérkskunde, der Mineralogie und Geognosie. Zweite Auflage. Weimar: Voigt, 1859-60.

3 vols. [VOL 1: 1859] 8°: ix, 613 p. (A-F). [VOL 2: 1859] 8°: 580 p. (G-O) [VOL 3: 1860] 8°: 547 p. (P-Z)

VERY SCARCE. Contents: I. A bis F. 2. G bis O. 3. P bis Z.

REFERENCES: BL: [no copy listed]. • NUC: 233, 164-7 [NH 150837].

2099. — German, 1835-6.

Lehrbuch der Mineralogie und Geologie zum gebrauchte für höhere Lehranstalten und zum Selbstunterricht für jeden Gebildeten von Carl Hartmann. Nürnberg, Johann Adam Stein, 1835-6.

2 vols. [VOL 1: 1835] 8°: p. 210 incorrectly numbered 110. [VOL 2: 1836] 8°: VERY SCARCE.

REFERENCES: BL: [W1/0366 DSC].

2100. — German, 1837.

Anleitung zum selbststudium der Mineralogie. Nach dem Book of Science, von Karl Hartmann ... Leipzig: Verlag der Expedition des Pfennigmagazins (F.A. Brockhaus), 1837.

8°: xx, [2], 258 p., illus., diagrs.

VERY SCARCE. Mineralogy. Contains a "Kurze übersicht der geschichte und literatur der mineralogie" on pages 2-10.

REFERENCES: NUC: 233, 164-7 [NH 0150806].

2101. — German, 1837.

Anleitung zum selbststudium der Krystallographie. Nach dem Book of Science, von Karl Hartmann ... Leipzig: Verlag der Expedition des Pfennigmagazins (F.A. Brockhaus), 1837.

8°: iv, 42 p., frontispiece, illus., diagr.

VERY SCARCE. Crystallography.

REFERENCES: NUC: 233, 164-7 [NH 0150805].

2102. — German, 1838-48.

Taschenbuch für reisende Mineralogen, Geologen, Berg- und Hüttenleute, durch die Hauptgebirge Deutschlands und der Schweiz. Nebst einem Atlas mit 14 Tafeln geolog. Kärtchen und Profile. Von Carl Hartmann. Weimar: B.F. Voigt, 1838.

8°: viii, 415, [1] p., 14 hand-colored lithographic plates.

VERY SCARCE. Periodical[?].

REFERENCES: NUC: 233, 164-7 [NH 0150861].

Die Mineralogie. Nach dem neuesten Entdeckungen im Mineralreiche, auf Allgemein faßliche Weise vortragen von Robert Allan ... Deutsche bearbeitet von Carl Hartmann. (Quedlinburg, 1838).

See: Allan, Robert.

2103. — German, 1854.

Der | Autodidaktische Mineralog | oder | leichtfaßliche Anleitung | zum | Selbststudium der Mineralogie. | [rule] | Ein | Handbuch für Berg- und Hüttenleute, Techniker aller Art, Forst- | und Landwirthe, Aerzte und Pharmaceuten, | so wie | überhaupt für alle Diejenigen, welche sich in dem Steinreiche orientiren | und gründliche Kenntnisse von demselben erlangen wollen. | [rule] | Von | Carl Hartmann. | [rule] | Mit 7 lithographirten Tafeln mit Krystallfiguren. | [double rule] | Leipzig. | Verlag von Ernst Schäfer. | 1854.

8°: vi, 286 p., 7 plates.

VERY SCARCE. Mineralogy.

REFERENCES: NUC: 233, 164-7 [NH 0150809].

2104. — German, 1829 [First edition].

Die | Mineralogie | in sechs und zwanzig Vorlesungen. | [rule] | Ein Lehrbuch | für | Berg-, Forst-, Real- und polytechnische Schulen, | Gymnasien und zum Selbststudium, | von | Dr. Carl Friedr. Alex. Hartmann. | [ornament] | [rule] | Mit 358 Holzschnitten. | [tapered rule] | Ilmenau 1829. | Gedruckt und verlegt bei Bernh. Fr. Voigt.

8°: xxvi, [2], [2], [iii]-xlviii, 452 p., illus.

VERY SCARCE. Mineralogy. Bibliography pages vi-ix.

REFERENCES: NUC: **233**, 164-7 [NH 0150844].

2105. 2nd edition, 1843-50: Handbuch der Mineralogie zum gebrauch für jedermann, besonders aber für universitäten, berg-, forst-, und polytechnische Akademien, zum selbststudium und für Sammler. Von Carl Hartmann. Zugleich als zweite ganz umgearb. und sehr vermehrte Auflage der 'Mineralogie in 26 Vorlesungen.' ... Weimar: B.F. Voigt, 1843-50.

3 vols. and atlas. [VOL 1] 8°: x, 559, [1] p. [VOL 2] xviii, 946 p. [VOL 3] xii, 629, [1] p. [Atlas] 4°: 4 engraved and 30 lithographic plates.

VERY SCARCE. Mineralogy. Bibliographies appear in vols. 1, pp. vi-ix and 3, pp. vi-viii.

REFERENCES: NUC: **233**, 164-7 [NH 0150829].

2106. — German, 1850.

Die neuesten Entdeckungen und Forschungs-Resultate auf dem Gebiete der gesamten Mineralogie seit dem Jahre 1843. Weimar, Hamm, 1850.

8°: VERY SCARCE.

Berg- und hüttenmännische Zeitung, mit besonderer Berücksichtigung der Mineralogie und Geologie [Edited by C.F.A. Hartmann]. (Berlin, 1841-58).

See: *Berg- Und Hüttenmännische Zeitung*.

2107. — German, 1838.

Die Wunder der Erdrinde, oder, Gemeinfassliche Darstellung der Mineralogie und Geologie mit besonderer Berhuckstchtigung ihrer Anwendung auf Künste und Gewerbe von Carl Hartmann. Stuttgart, J. Scheible, 1838.

8°: xvi, 944 p., [23] leaves of plates : ill. VERY SCARCE.



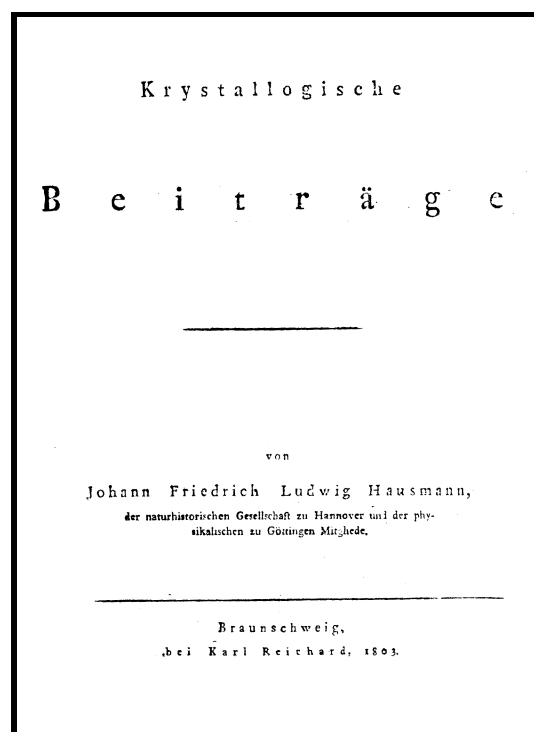
HAUSMANN

HAUSMANN, Johann Friedrich Ludwig. (BORN: Hannover, Germany, 22 February 1782; DIED: Göttingen, Germany, 26 December 1859) *German mineralogist*.

Hausmann received his formal education at the University of Göttingen, from which he graduated with

a Ph.D. in 1806. Afterward he made an extended one year geological tour of Denmark, Norway and Sweden. An appointment as General Inspector of Mines for Westphalia came in 1809, and in 1811, Hausmann accepted a position as professor of technology and mining at the Göttingen. Later he became professor of geology and mineralogy. In 1811, Hausmann was elected a member of the Königl. Societät der Wissenschaften in Göttingen, a body for which he served as secretary from 1840 to 1859. The mineral "Hausmannite" was named after him by W. Haidinger in 1831.

REFERENCES: ADB: **11**, 94. • Barr, *Index to Biographical Fragments*, 1973: 115. • DBA: I 487, 341-363; II 536, 406-410. • *Encyclopaedia Britannica*, 11th edition. • Lambrecht & Quenstedt, *Catalogus*, 1938: 191. • NDB: **8**, 124-5 [by W. Fischer]. • Poggendorff: **1**, cols. 1035-7. • Sarjeant, *Geologists*, 1980: **2**, 1214. • Schaedler, *Biographisch Handwörterbuch*, 1891: 48. • WBI. • *World Who's Who in Science*: 769.



KRYSTALLOGRAPHISCHE BEITRÄGE, 1803

2108. — German, 1803.

Krystallographische | Beiträge | [rule] | Von | Johann Friedrich Ludwig Hausmann, | der naturhistorischen Gesellschaft zu Hannover und der phy- | sikalischen zu Göttingen Mitghede. | [rule] | Braunschweig, | bei Karl Reichard, 1803.

4°: *2 A-I⁴ K²; 40 ℓ .; [i]-iv, [1]-74, [2] p., 5 plates.

PAGE SIZE: 218 x 175 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-iv, "Vorerinnerung."—signed J.F.L. Hausmann, December 1802.; [1-2], [Sectional title page?; missing from copy examined]; [3]-74, Text.; [1 pg], "Druckfehler."; [1 pg], Blank.; [At end], [5 plates; missing from copy examined].

HAUSMANN

VERY SCARCE. The first attempt at applying spherical trigonometry to crystallographic description. In the preliminaries, Hausmann writes of being influenced by RENÉ JUST HAÛY's *Traité de Mineralogie* (1st ed., Paris, 1801). After some thought, he decided to apply the techniques of spherical trigonometry to the problem of crystal description, and the results of this research is reproduced in this work.

The text is divided into six sections. The first (pp. 2–20) give a short account of Haüy's theory of the structure of crystals. Each of the remaining five sections describe the crystallization of a single mineral. Described species are boracite (from Lüneburg, Germany), feldspar, barite, sphalerite and magnetite (from Ilfeld, Germany). For each mineral, information from Haüy's work is provided, and then Hausmann presents the application of his mathematical treatment to the crystallographic problem.

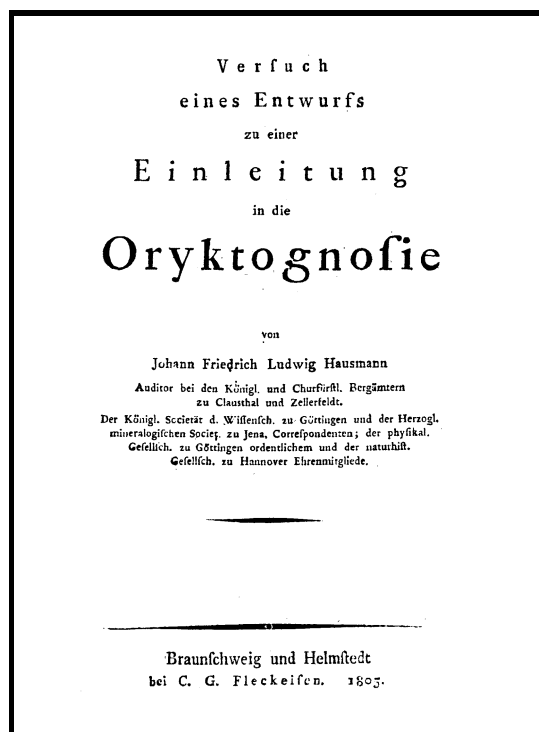
REFERENCES: LKG: IX 26. • Zittel, *History of Geology*, 1901: p. 495.

2109. — German, 1805.

Etwas über die allgemeinen Wirkungen der Krystallisationskraft. Eine Einladungschrift von Johann Friedrich Hausmann ... Braunschweig, 1805.

16°. VERY SCARCE.

REFERENCES: LKG: IX 27a. • NUC: 235, 121-2.



VERSUCH EINES ENTWURFS, 1805

2110. — German, 1805.

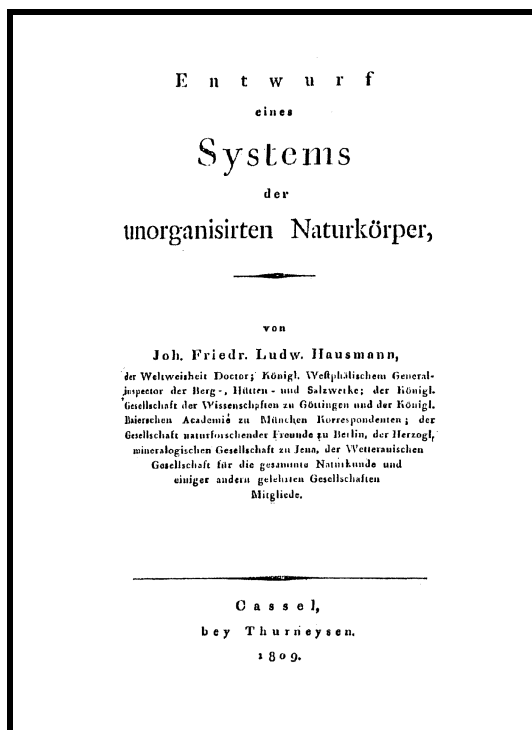
Versuch | eines Entwurfs | zu einer | Einleitung | in
die | Oryktognosie | von | Johann Friedrich Ludwig
Hausmann | [...6 lines of titles and memberships...]
| [tapered rule] | [tapered rule] | Braunschweig und
Helmstedt | bei C.G. Fleckeisen. 1805.

8°: *6 A-L⁸ M⁶; 100ℓ.; [i]-xiv, [1]-188 p. PAGE
SIZE: 200 x 110 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii],
Dedication to Professor Knoch.; [iv], Blank.; [v]-xiv,
"Vorwort."—dated December 1804.; [1]-10, "Einleitung.";
[11], "Terminologie."; [12], Blank.; [13]-148, Text.; [149],
"Systematologie."; [150], Blank.; 151-177, Text.; [178]-188,
"Register."

VERY SCARCE. Considered very valuable
as an introduction to mineralogy, Hausmann has
carefully compiled and digested everthing known
about mineralogical science, occasionally interweaving
the text with his own personal views. After a
short introduction to mineralogy, a long section
giving definitions of terminology and another covering
systematics is presented. A general index completes the
work.

REFERENCES: Dana's 7th (Bibliography): 73.



ENTWURF EINES SYSTEMS, 1809

2111. — German, 1809.

Entwurf | eines | Systems | der unorganisirten
Naturkörper, | [tapered rule] | von | Joh.
Friedr. Ludw. Hausmann, | [...9 lines of titles and

memberships... | [tapered rule] | Cassel, | bey Thurneysen. | 1809.

8°: A-I⁸ (I⁵ missigned I⁴ and I⁶ missigned I⁵); 72ℓ.; [1]-141, [1] p. PAGE SIZE: 200 x 110 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], Dedication to Johann Friedrich Blumenbach.; [4], Blank.; [5]-141, Text.; [1], "Gedruckt bei Johann Friedrich Röwer."

VERY SCARCE. The primary force behind the existence of this work were discussions between Gustav Magnus Schwartz [q.v.] and Hausmann concerning an appropriate system by which mineral substances could be organized. After Schwartz's death, Hausmann endeavored to fulfill a promise made to his collaborator and published this discourse, which outlines their system.

REFERENCES: Dana's 7th (Bibliography): 73. • *Freilich Sale Catalog*: no. 226. • Leonard's *Taschenbuch*: 5, 326-7. • LKG: XII 178. • NUC: 235, 121-2. • Zittel, *Geschichte der Geologie*, 1899: p. 118.

2112. — German, 1811-8.

Reise durch Skandinavien im den Jahren 1806 und 1807, von Johann Friedrich Ludwig Hausmann ... Göttingen: J.F. Röwer, 1811-18.

5 vols. [VOL 1: 1811] 8°: xii, 336 p., 3 folding plates. [VOL 2: 1812] 8°: xiv, 380 p., 3 folding plates. [VOL 3: 1814] 8°: iv, 468 p., 3 folding plates. [VOL 4: 1816] 8°: iv, 372 p., 5 folding plates, 9 folding tables. [VOL 5: 1818] 8°: iv, 436 p., 8 folding plates, (2 hand-colored), one folding table.

VERY SCARCE. Topographical – Scandinavia.

REFERENCES: BL: [1427.h.3-4.]. • LKG: XIV 811. • NUC: 235, 121-2.

2113. — German, 1813 [First edition].

Handbuch | der | Mineralogie | von | Joh. Friedr. Ludw. Hausmann, | ordentlichem Professor der Philosophie und Mitglieder der Königl. | Gesellschaft der Wissenschaften zu Göttingen. | [rule] | Erster Band, | die Einleitung und vom Systeme, die Klasse der Kombustibilien | und aus der Klasse der Inkombustibilien, die Unterordnung der | Metalloxyd enthaltend. | [tapered rule] | Göttingen, | bei Vandenhoeck und Ruprecht. | 1813.

[TITLE PAGE, VOLUME TWO:]

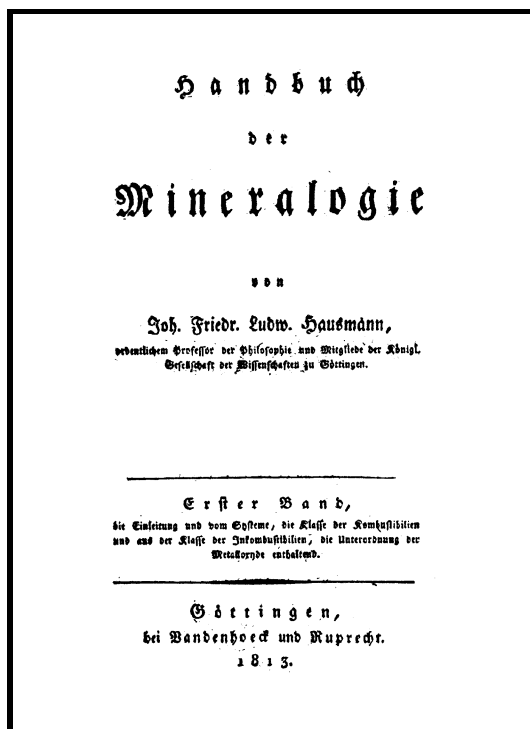
Handbuch | der | Mineralogie | ... | Zweiter Band, | aus der Klasse der Inkombustibilien die Unterordnung der Erden | enthaltend. | ... | 1813.

[TITLE PAGE, VOLUME THREE:]

Handbuch | der | Mineralogie | ... | Dritter Band, | aus der Klasse der Inkombustibilien die Ordnungen der Oxydoide, | Säuren und Salze enthaltend. | ... | 1813.

3 vols. usually bound in one. [VOL 1] 8°: *1 3B⁵-3B⁸ 3C-3Z⁸ 4A-4C⁸ 4D³; 200ℓ.; [2], 761-1158 p. PAGE SIZE: 180 x 120 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [i]-xiv, "Vorrede."—dated 19 June 1813; xv-xvi, "Druckfehler."; [1]-42, "Einleitung."; 43-50, "Uebersicht



HANDBUCH DER MINERALOGIE, 1813

| Hieniger Mineralsysteme."; [51], "System | der | unorganisirten Naturkörper."; [52], Blank.; 53-350, Text.; 351-352, "Anhang."

[Vol 2] [2 pgs], Title page, verso blank.; 353-760, Text.

[Vol 3] [2 pgs], Title page, verso blank.; 761-1130, Text.; 1131-1148, "Deutsches Register."; 1149-1158, "Französisches Register."

VERY SCARCE. A thorough compendium classifying every known mineral species. Following the introduction is an overview of the classification system. The system Hausmann follows in this enterprise, was originally presented in his *Entwurf eines Systems der unorganisirten Naturkörper* (Cassel, 1809) [see above entry]. Only slight modifications have been made to the system from the earlier work. After this overview the more detailed descriptive mineralogy arranged according to the outline is presented. It is divided into the classes of combustibles, incombustibles, earths, oxides, acids and salts. Throughout the volumes Hausmann has applied careful and judicious judgement in expressing his own views and the mention of new discoveries and theories. Volume three concludes with two indexes. Each lists the described mineral species, one referencing names in German, while the other lists names in French.

REFERENCES: Dana's 7th (Bibliography): 73. • *Freilich Sale Catalog*: no. 227.

2114. 2nd edition, 1828-47: Handbuch | der | Mineralogie | von | Joh. Friedr. Ludw. Hausmann, | [...3 lines of titles and memberships...] | Erster Theil. | Einleitung in die Mineralogie. | [rule] | Mit zwei Kupfertafeln. | [rule] |

HAUSMANN

Zweite, gänzlich umgearbeitete Ausgabe. | [tapered rule] | Göttingen, | bei Vandenhoeck und Ruprecht. | 1828.

[ADDITIONAL TITLE PAGE, PART ONE:]

Versuch | einer | Einleitung | in die | Mineralogie | von | Joh. Friedr. Ludw. Hausmann, | [...3 lines of titles and memberships...] | [rule] | Mit zwei Kupfertafeln. | [tapered rule] | Göttingen, | bei Vandenhoeck und Ruprecht. | 1828.

[TITLE PAGE, PART TWO, VOLUME ONE:]

Handbuch | der | Mineralogie | von | Joh. Friedr. Ludw. Hausmann, | [...2 lines of titles and memberships...] | Zweiter Theil. | System und Geschichte der Mineralkörper. | [rule] | Erster Band. | Mit einer Kupfertafel. | [rule] | Zweite, gänzlich umgearbeitete Ausgabe. | [tapered rule] | Göttingen, | bei Vandenhoeck und Ruprecht. | 1847.

[TITLE PAGE, PART TWO, VOLUME TWO:]

Handbuch | der | Mineralogie | ... | Zweiter Band. | ... | 1847.

[SERIES TITLE PAGES, PART TWO:]

System | und | Geschichte der Mineralkörper | von | Joh. Friedr. Ludw. Hausmann, | [...2 lines of titles and memberships...] | Erster [-Zweite] Band. | Mit einer Kupfertafel. | [rule] | Zweite, gänzlich umgearbeitete Ausgabe des Handbuches | der Mineralogie. | [tapered rule] | Göttingen, | bei Vandenhoeck und Ruprecht. | 1847.

2 parts bound in 3 vols. [Part 1: 1828] 8°: π^8 b7 1-43⁸; 359^l.; [i]-xxx, [1]-687, [1] p., 2 folding plates. [Part 2, vol 1: 1847] 8°: π^8 b6 1-56⁸; 462^l.; [i]-xxviii, [1]-896 p., one plate. [Part 2, vol 2: 1847] 8°: π^3 57-103⁸ 104⁷; 386^l.; [i]-vi, 897-1660, [2] p. PAGE SIZE: 202 x 120 mm.

CONTENTS: [Part 1] [i-ii], Title page, verso quotation signed Horatius.; [iii]-[iv], Additional title page, verso quotation signed Horatius.; [v], Dedication to Johann Christian Ludewig Hellwig.; [vi], Blank.; [vii]-x, "Vorrede."—dated 7 September 1828.; [xi]-xxx, "Inhalt.;" [1]-674, Text.; [675]-687, "Register.;" [1 pg], "Druckfehler und Verbesserungen."—at bottom of page, "Gedruckt bei Friedr. Ernst Huth.;" [At end], 2 folding plates.

[Part 2, vol 1] [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-xii, "Vorwort"—dated 7 September 1847.; [xiii]-xx, "Nachtrag | zum ersten Theile des Handbuches der Mineralogie | seit 172-191.;" [xxi]-xxvi, "Abkürzungen | der Titel der angeführten Schriften.;" [xxvii]-xxviii, "Inhalt des ersten Bandes.;" [1]-896, Text.; [At end], Plate.

[Part 2, vol 2] [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-vi, "Inhalt des zweiten Bandes.;" 897-1554, Text.; [1555]-1612, "Nachträge.;" [1613]-1642, "Deutsches Register.;" [1643]-1651, "Französisches Register.;" [1652]-1660, "Englisches Register.;" [2 pgs], "Verbesserungen."

PLATES: There are two folding plates at the end of part one and one plate at the end of part two, volume one. Each of them shows various crystal drawings. None are signed.

VERY SCARCE. Part one of this work, comprising the first volume, is a comprehensive, well thought out introduction to mineralogical science. In the forward, Hausmann writes that this new edition of his *Handbuch* is made necessary by the many changes in the science of mineralogy, particularly with regard to chemistry and crystallography. All parts of the science had undergone transformation and there had been new discoveries. After presenting a generalization of these events, Hausmann explains that these changes are digested into this introduction. In this first part, the basic concepts of the science are covered. Included is material on terminology, theoretical principles, nomenclature, and systematic classification. The second portion of the work was published in two volumes and consists of the descriptive mineralogy. As in the previous edition, all known mineral species are described in the classification devised by Hausmann.

The first volume was also issued under the title: *Versuch einer Einleitung in die Mineralogie* (Göttingen, 1828) [see entry below].

REFERENCES: Dana's 7th (Bibliography): 73. • Leonard's *Taschenbuch*: 8, 576-7. • NUC: 235, 121-2.

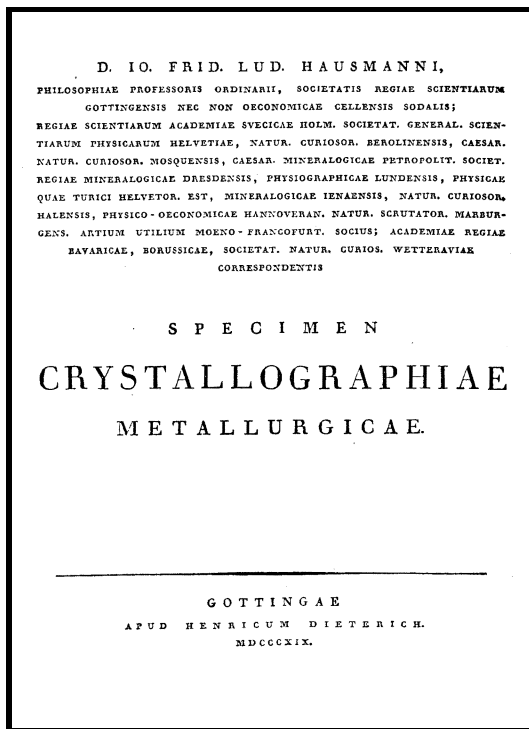
2115. — German, 1828.

Versuch | einer | Einleitung | in die | Mineralogie | von | Joh. Friedr. Ludw. Hausmann, | [...3 lines of titles and memberships...] | [rule] | Mit zwei Kupfertafeln. | [tapered rule] | Göttingen, bei Vandenhoeck und Ruprecht. | 1828.

8°: π^7 b7 1-43⁸; 359^l.; [iii]-xxx, [1]-687, [1] p., 2 folding plates. PAGE SIZE: 202 x 120 mm.

CONTENTS: [iii]-[iv], Additional title page, verso quotation signed Horatius.; [v], Dedication to Johann Christian Ludewig Hellwig.; [vi], Blank.; [vii]-x, "Vorrede."—dated 7 September 1828.; [xi]-xxx, "Inhalt.;" [1]-674, Text.; [675]-687, "Register.;" [1 pg], "Druckfehler und Verbesserungen."—at bottom of page, "Gedruckt bei Friedr. Ernst Huth.;" [At end], 2 folding plates.

VERY SCARCE. This work was published as the first volume of Hausmann's *Handbuch der Mineralogie* (2nd ed., 2 parts in 3 vols., Göttingen, 1828-47). It is identical in all respects except that the series title page has been excised.



SPECIMEN CRYSTALLOGRAPHIAE, 1819

2116. — Latin, 1819.

D. Io. Frid. Lud. Hausmanni, | [...11 lines of titles and memberships...] | Specimen | Crystallographiae

| Metallurgicae. | [tapered rule] | Gottingae | Apud
Henricum Dieterich. | MDCCCXIX.

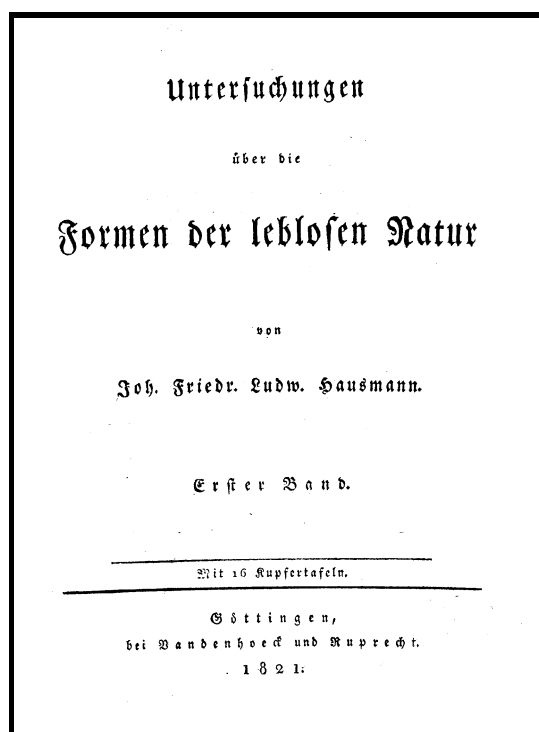
4°: A-D⁴; 16ℓ.; [1]-32 p., one plate. PAGE SIZE:
235 x 200 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-32,
Text.; [At end], Plate.

PLATES: Bound at the end is one plate showing 20
figures of crystal drawings. It is signed "Hausm. Sp. C.M.
Com Tom."

VERY SCARCE. Describes the crystallization of
various metallic substances in an attempt to discover
some commonality. Included are discussions of
iron, copper, nickel, arsenic, graphite, metal/sulphur
compounds, metallic oxides and arsenides.

REFERENCES: NUC: 235, 121-2.



UNTERSUCHUNGEN ÜBER DIE FORMEN, 1821

2117. — German, 1821.

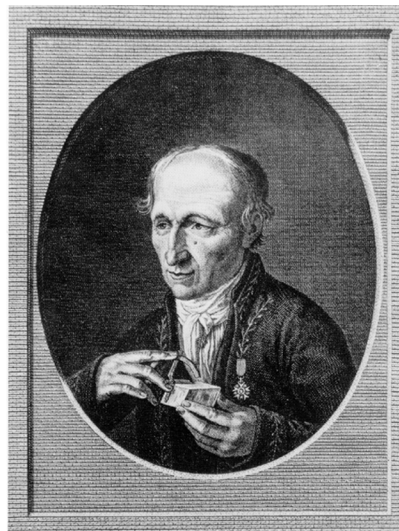
Untersuchungen | über die | Formen der leblosen
Natur | von | Joh. Friedr. Ludw. Hausmann. |
Erster Band. | [rule] | Mit 16 Kupfertafeln. | [rule]
| Göttingen, | bei Bandenhoeck und Ruprecht. |
1821.

4°: π^4 1-94⁴ 85³; 343ℓ.; [i]-viii, [1]-677, [1] p., 16
folding plates (crystal drawings). PAGE SIZE: 240 x 190
mm.

CONTENTS: [i-ii], Title page, verso 7 lines of quotation
signed J. Hutton.; [iii]-vi, "Vorrede"—dated 18 October
1821.; [vii]-viii, "Inhalt."; [1]-677, Text.; [1 pg], Errata,
continued from page 677.; [At end], 16 folding plates.

SCARCE. No more published (part one only).
Hausmann's ambitious study of the laws of crystal
growth.

REFERENCES: *Freilich Sale Catalog*: no. 228.



HAÜY

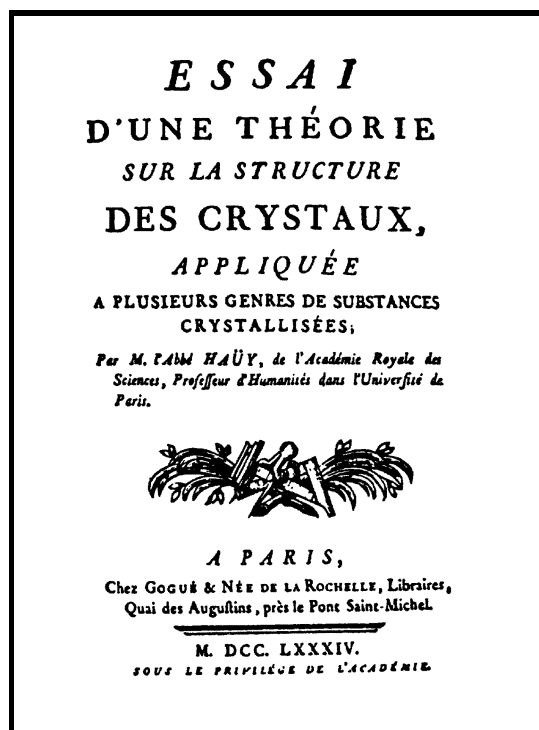
HAÜY, René Just. (BORN: St.-Just-en-Chaussée,
Oise, France, 28 February 1743; DIED: Paris, France,
1 June 1822) *French mineralogist & crystallographer.*

Born to a poor family, Haüy received a good classical
and theological education by means of a scholarship to
the Collège de Navarre in Paris. In 1770, after he was
ordained a priest, Haüy was assigned a teaching post at
the Collège Cardinal Lemoine. There he became interested
in botany, but after attending DAUBENTON's lectures on
mineralogy he turned his attention to mineralogy. Haüy
was elected an associate member of the Paris Academy of
Science in February 1783. In 1793, after the publication of
his *Essai d'une Théorie sur la Structure des Cristaux* (Paris,
1794), Haüy left teaching to devote his full attention to
mineralogical studies. During the French revolution, he
placed himself in jeopardy by refusing to swear the oath
required by the Civil Constitution of the Clergy. He was
arrested, but through the efforts of his former student,
E. GEOFFROY SAINT-HILAIRE, Haüy was released the night
before the others prisoners were executed. In 1793 he was
appointed to the Commission of Weights and Measures.
Also, in 1793, he attempted unsuccessfully to gain the
release of A. LAVOISIER. In 1795, he was appointed an
instructor of physics and mineralogy at the École des Mines
(School of Mines). After the death of D. DOLOMIEU, he
succeeded to the post of professor of mineralogy at the
Muséum d'Histoire Naturelle (Museum of Natural History),
where he greatly enlarged the mineral collection. In 1809,
Haüy also assumed the newly created chair of mineralogy
at the Sorbonne. He retained these posts until his death.

Haüy's own 12,000 specimen mineral collection was
sold in 1823 to the Duke of Buckingham. In 1848, it was
returned to France when the Jardine des Plantes purchased
it from the Duke's heirs. Today, over 6,000 specimens
labeled in Haüy's handwriting have been identified.

REFERENCES: ABF: I 505, 338-371; II 333, 315-319. •
Barr, *Index to Biographical Fragments*, 1973: 114. • *Catalogue
of Portraits of Naturalists*: 553 [7 portraits listed]. • Cleevely,
World Palaeontological Collections, 1983: 147. • Drugulin,
Sechstausend Portraits, 1863: nos. 2285-7. • DSB: 6, 178-83

[by R. Hooykaas]. • *ISIS*, 1913-65: 1, 549. • Poggendorff: 1, cols. 1038-41. • Sarjeant, *Geologists*, 1980: 2, 1215-7, Suppl. 1 (1986), 1, 480-1 & Suppl. 2 (1995), 1, 706-7. • WBI. • *World Who's Who in Science*: 769.



ESSAI D'UNE THÉORIE, 1784

2118. — French, 1784.

Essai | d'une Théorie | sur la Structure | des Crystaux, | Appliquée | a plusieurs genres de substances | cristallisées; | Par M. l'Abbé Haüy, de l'Académie Royale des | Sciences, Professeur d'Humanités dans l'Université de | Paris. | [ornament] | A Paris, | Chez Gogué & Née de la Rochelle, Libraires, | Quai des Augustins, près le Pont Saint-Michel. | [double rule] | M. DCC. LXXXIV. | Sous le Privilege de l'Académie.

8°: π^4 A-O⁸ P⁴ Q²; 122 ℓ .; [8], [1]-236 p., 8 folding plates, showing many figures of crystals both dissected and whole. PAGE SIZE: 198 x 127 mm.

CONTENTS: [2 pgs], Half title page, "Essai | d'une Théorie | sur la Structure | des Cristaux.," verso blank.; [2 pgs], Title page, verso blank.; [2 pgs], "Avertissement.;" [1 page], "Table | Des Articles.;" [1 pg], "Extrait des Registres de l'Académie Royale | des Sciences, du 26 Novembre 1783.;" [1]-46, "Introduction.;" [47]-230, Text.; [8 folding plates]; 231-236, "Table | Des Matieres."

VERY SCARCE. Haüy's first printed book, this work was instrumental in establishing a solid foundation on which modern theories of crystal structure rest. In it, Haüy brought together the advances in crystallography made by Romé de l'Isle, Bergman and others into a

coherent structural theory, based on the structural unit, the "molecule constituante" (later renamed by him to "molecule integrante"). Haüy's model depicted crystals as built up out of these molecular units which were polyhedral in form. Haüy also theorized a common "nucleus" or "primitive form" for all crystals of the same "species." This primitive form was often revealed by cleavage of a crystal symmetrically along its angles and edges. Haüy's theory of crystal structure changed little in its essentials during the remainder of his career, which went on for almost forty years after the publication of the *Essai*.

After the introduction, the text is divided into ten articles, the first two of which describe the structure of crystals based upon primary and secondary forms. The next seven articles apply the theory to various minerals, while the final chapter gives observations and conjectures on the formation of crystals.

REFERENCES: Dibner, Bern., *Doctor William Gilbert*, New York, 1947: 92. • *Freilich Sale Catalog*: no. 229. • Horblit: no. 47. • LKG: IX 14. • Mauskopf, *Minerals, Molecules and Species*, 1970: 185-206. • Norman Catalog: 1, no. 1021. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1020. • Wellcome Catalog (Books): 3, 224. • Wilson, *History of Mineral Collecting*, 1994: 53-6.

2119. — French, 1793.

Exposition | abrégée | De La Théorie Sur La Structure | Des Crystaux. | par M. Haüy. | Extrait du Journal d'Histoire Naturelle, | rédigé par MM. Lamarck, Bruguière, | Olivier, Haüy et Pelletier. | [rule] | A Paris, | Chez les Directeurs de l'Imprimerie du Cercle | Social, rue du Théâtre-François, N^o. 4. | 1793.

8°: A-F⁸ G²; 26 ℓ .; [1]-52 p., 2 folding plates (numbered Pl. 9 & Pl. 11). PAGE SIZE: 197 x 125 mm.

CONTENTS: [1-2], Title page, verso blank.; 3-52, Text.; [At end], 2 folding plates.

PLATES: The two folding plates are signed Benard direxit. Plate 9 shows figures 1-19, while plate 11 depicts figures 20-48.

VERY SCARCE. An abridged edition of Haüy's *Essai d'une Théorie sur la Structure des Crystaux* (Paris, 1784), apparently reprinted from an article in the *Journal d'Histoire Naturelle*???? The *Royal Society Catalogue of Scientific Papers* (3, 230) lists a paper: "Exposition abrégée de la Theorie de la structure des Cristaux," *Annales de Chimie*: 3 (1789), 1-28.

REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: 85. • Cole, *Chemical Literature*, 1988: no. 611 [1792 imprint].

2120. — French, 1797.

Extrait | D'Un Traité Élémentaire | De | Minéralogie, | Rédigé Par Le C.^{en} Haüy, | Membre de l'Institut national, Conservateur | des collections de la Maison d'instruction pour | l'exploitation des mines. | Publié Par Le Conseil Des Mines De La République. | Cet. Extrait, qui a déjà été donné par parties dans le Journal

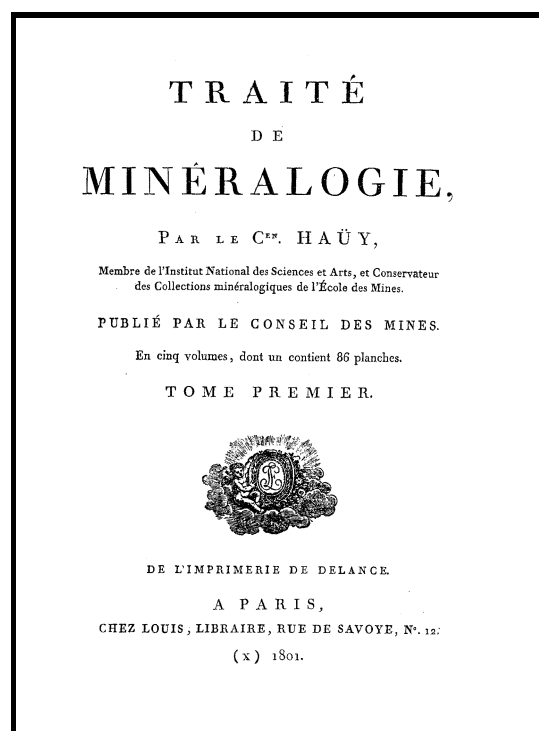
des | mines, contient le discours préliminaire du
Traité, la méthode qu'on y | a adoptée, avec les
observations les plus neuves qui doivent en faire
| partie, et les descriptions détaillées de quelques
espèces. | [Le Traité sera publié incessamment.] |
[tapered rule] | A Paris, | De L'Imprimerie De La
République. | [rule] | An V.

8°: A-S⁸ 2A⁷; 150ℓ.; [1]-286 p., Plates XX-XXII,
[1]-14 p. PAGE SIZE: 196 x 125 mm.

CONTENTS: [1]-2], Title page, verso blank.; [3]-6,
"Avertissement. | Par le C.en Charles Coquebert."; [7]-
286, Text.; Plates XX-XXII.; [1]-14, "Table Des Matières |
De l'Extrait du Traité de Minéralogie | Rédige par le C.en
Haüy."

PLATES: Comprise three engravings labelled XX-XXII
and signed Cloquet Sculp. that were originally issued in the
Journal des Mines, 29, no. 5.

VERY RARE. Prior to the publication of his great
work, *Traité de Minéralogie* (Paris, 1801) and perhaps
at the urging of the French revolutionary council, Haüy
published an extract of the first volume in the *Journal
des Mines* [see 29, ?????]. It apparently generated
enough interest that this very scarce book containing
a reprint of that article and the accompanying 3 plates
was prepared from it. In the advertisement, Coquebert
informs the public that Citizen Haüy is totally engaged
in completing the manuscript of his great work that will
contain many new observations about crystallography
and mineralogy as outlined in this *Extrait*.



TRAITÉ DE MINÉRALOGIE, 1801 (ISSUE A)

2121. — French, 1801 [First edition, issue A].

Traité | de | Minéralogie, | Par le C^{en}. Haüy, |
Membre de l'Institut National des Sciences et Arts,
et | Conservateur des Collections minéralogiques
de l'École | des Mines. | Publié par le Conseil
des Mines. | En cinq volumes, dont un contient
86 planches. | Tome Premier. | [ornament] | De
L'Imprimerie de Delance. | A Paris, | Chez Louis,
Libraire, Rue de Savoye, N^o. 12. | (X) 1801.

[TITLE PAGE OF ATLAS READS:]

Traité De Minéralogie, | Par Le C^{en}. Haüy, |
Membre de l'Institut National des Sciences et Arts,
et Conservateur | des Collections Minéralogiques
de l'École des Mines. | Publié Par Le Con-
seil Des Mines. | Tome Cinquième. | Carac-
tères Minéralogiques. Distribution méthodique des
Minéraux. | Figures Géométriques. | [ornament] |
A Paris, | Chez Louis, Libraire, Rue De Savoye,
N^o. 12. | (X) 1801.

4 vols. and atlas. [VOL 1] 4°: π^2 a-d⁴ e³ A-2S⁴
2T³; 185ℓ.; [4], i-xxxij, [1]-332, [2] p.; [VOL 2] 4°: π^2 A-
I⁴ 3K⁴; 225ℓ.; [4], [1]-444, [2] p.; [VOL 3] 4°: π^2 A-3F⁴
3G²; 212ℓ.; [4], [1]-418, [2] p.; [VOL 4] 4°: π^2 A-3F⁴ χ^1 ;
211ℓ.; [4], [1]-416, [2] p.; [Atlas] Oblong 4°: [8], [1]-10,
[1], [1] blank p., 86 plates (Numbered I-LXXXVI). PAGE
SIZE: (Text) 260 x 204 mm., (Atlas) 290 x 220 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, verso
"Extrait du Décret concernant ..."; [2 pgs], Title page,
verso blank.; i-xxxiv, "Discours | Préliminaire."; [xxxv]-
xxxij, "Avertissement | Sur | La Synonymie | ..."; [1]-332,
Text.; [1 pg], "Errata, Tome I."; [1 pg], Blank.

[Vol 2] [2 pgs], Half title page, verso blank.; [2 pgs],
Title page, verso blank.; [1]-444, Text.; [1 pg], "Errata,
Tome II."; [1 pg], Blank.

[Vol 3] [2 pgs], Half title page, verso blank.; [2 pgs],
Title page, verso blank.; [1]-418, Text.; [1 pg], "Errata,
Tome III."; [1 pg], Blank.

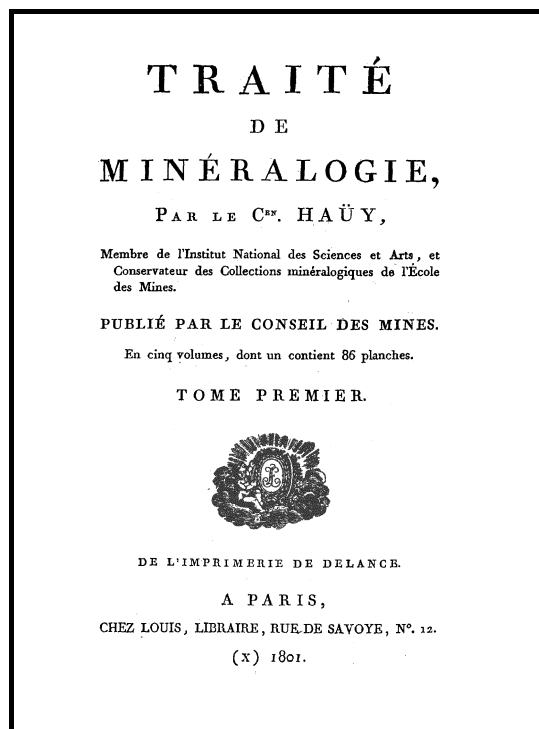
[Vol 4] [2 pg], Half title page, verso blank.; [2 pgs],
Title page, verso blank.; [1]-363, Text.; [364], Blank.; [365]-
416, "Table | Des Matières."; [1 pg], "Errata."; [1 pg],
Blank.

PLATES: Comprise 86 engravings showing mostly
crystal drawings and diagrams and numbered I to
LXXXVI. They are signed Cloquet Sculp. These are the
same as issued with the octavo edition.

EXTREMELY RARE. This is a different earlier issue
of the complete text of the *Traité de Minéralogie* in
a quarto sized volume. The text has been reset to
utilize the larger paper size, and based on the Errata,
this appears to be an earlier issue of the *Traité*, which
perhaps for economic reasons of paper and binding
material was reduced in size to the more common octavo
issue. The Freilich Sale Catalog calls this a large paper
issue, which it is not. The text is completely reset,
rather than being printed on a larger paper size stock.
So far only four copies of this issue has been located.

REFERENCES: CBN. • Dana's 7th (Bibliography): 73.
• Freilich Sale Catalog: no. 233.

2122. First edition, issue B, 1801: Traité | de | Minéralogie,
| Par le C^{en}. Haüy, | Membre de l'Institut National
des Sciences et Arts, et | Conservateur des Collections
minéralogiques de l'École | des Mines. | Publié par le



TRAITÉ DE MINÉRALOGIE, 1801 (ISSUE B)

Conseil des Mines. | En cinq volumes, dont un contient 86 planches. | Tome Premier. | [ornament] | De L'Imprimerie de Delance. | A Paris, | Chez Louis, Libraire, Rue de Savoye, N^o. 12. | (X) 1801.

[TITLE PAGE OF ATLAS READS:]

Traité De Minéralogie, | Par Le C^{te}. Haüy, | Membre de l'Institut National des Sciences et Arts, et Conservateur | des Collections Minéralogiques de l'École des Mines. | Publié Par Le Conseil Des Mines. | Tome Cinquième. | Caractères Minéralogiques. Distribution méthodique des Minéraux. | Figures Géométriques. | [ornament] | A Paris, | Chez Louis, Libraire, Rue De Savoye, N^o. 12. | (X) 1801.

4 vols. and atlas. [VOL 1] 8^o: π^2 a-c⁸ d⁴ A-Z⁸ 2A-2H⁸; 278 ℓ .; [4], [ii]-lvj, [1]-494, [1] errata, [1] p.; [VOL 2] 8^o: π^2 A-Z⁸ 2A-2P⁸ 2Q⁴ R²; 312 ℓ .; [4], [1]-617, [3] p.; [VOL 3] 8^o: π^2 A-Z⁸ 2A-2N⁸ 2O⁷; 297 ℓ .; [4], [1]-588, [2] p.; [VOL 4] 8^o: π^2 A-Z⁸ 2A-2O⁸ χ^1 ; 299 ℓ .; [4], [1]-592, [2] p.; [Atlas] Oblong 4^o: π^4 A⁴ B²; 10 ℓ .; [8], [1]-10, [2] p., 86 plates (Numbered I-LXXXVI). PAGE SIZE: (Text) 202 x 125 mm., (Atlas) 290 x 220 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Traité | De | Minéralogie. | Tome I.," verso "Extrait du Décret concernant les Contrefacteurs, | 19 Juillet 1793."; [2 pgs], Title page, verso blank; [ii]-lij, "[double rule] | Discours | Préliminaire."; [liii]-lvj, "[double rule] | Avertissement | Sur la synonymie employée dans ce Traité, et | sur quelques autres objets de détail."; [1]-494, Text.; [1 pg], "Errata, Tome I."; [1 pg], Blank;

[Vol 2] [2 pgs], Half title page, "Traité | De | Minéralogie. | Tome II.," verso blank; [2 pgs], Title page, verso blank; [1]-617, Text.; [1 pg], Blank; [1 pg], "Errata, Tome II."; [1 pg], Blank;

[Vol 3] [2 pgs], Half title page, "Traité | De | Minéralogie. | Tome III.," verso blank; [2 pgs], Title page, verso blank; [1]-588, Text.; [1 pgs], "Errata, Tome III."; [1 pg], Blank;

[Vol 4] [2 pgs], Half title page, "Traité | De |

Minéralogie. | Tome IV.," verso blank; [2 pgs], Title page, verso blank; [1]-512, Text.; [513]-587, "[double rule] | Table | des Matières."; 587-592, "[double rule] | Table | Des Noms Allemands."; [1 pg], "Errata, Tome IV."; [1 pg], Blank;

[Atlas] [2 pgs], Title page, verso blank; [1 pg], "Caractères | Minéralogiques."; [4 pgs], "Système de Caractères | relatifs | aux Minéraux."; [1 pg], Blank; [1]-10, "[double rule] | Distribution Méthodique | Des Minéraux, | par Classes, Ordres, Genres et Espèces."; [1 pg], "Figures | Géométriques."; [1 pg], Blank; [At end], 86 plates, numbered I-LXXXVI.

PLATES: Comprise 86 engravings showing mostly crystal drawings and diagrams and numbered I to LXXXVI. They are signed Cloquet Sculp.

SCARCE. This work is arguably the most influential work written in the historical development of mineralogy and crystallography. It far superseded any previous attempt to create a mineralogical classification. It is a work of comprehensive insight, and much of it, written in literary fluency, repays the casual curiosity of mineralogists and historians of science. Haüy's magnum opus containing his theory of crystal structure and his system of mineral classification. Haüy's law of decrement states led his successors directly to the law of rational indices, one of the fundamental laws of modern crystallography. This work was immediately recognized as the most important offered by France to the science of mineralogy, one that placed the country at the forefront of the European nations in this science. In it the author makes crystallography the basis of his determination of mineral species, relegating the data derived from chemical analysis to second rank. The mathematical precision with which the crystallographic facts could be presented provided an absolutely exact basis for mineralogy which it had lacked before that time, as the correctness of the crystallographic determinations could always be proved by rigid geometrical tests.

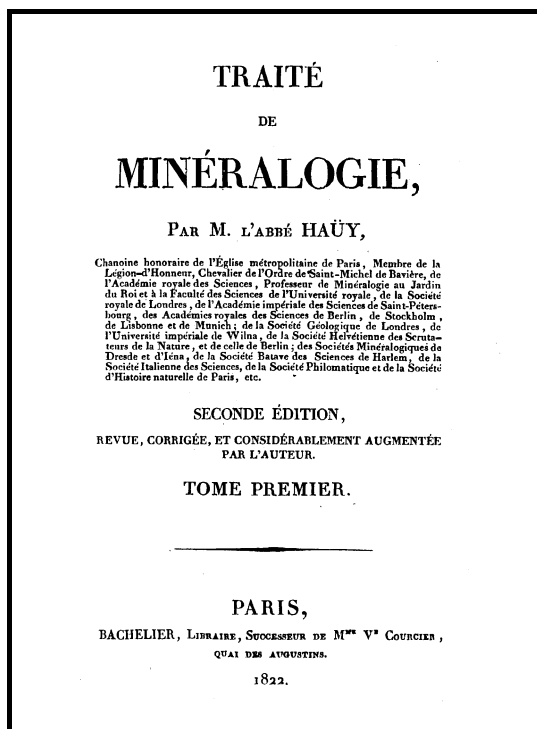
In his mineral classification, Haüy believed that chemistry played a secondary rôle to crystallography in determining species groups. The work also contains Haüy's discovery of piezo-electricity.

The work opens with a Preliminary Discourse that assumes the character of a literary dissertation, generally philosophic, frequently eloquent, and always dignified and learned. Haüy first draws comparisons between the study of minerals and the obvious charms of zoology and botany, with their living subjects to study. He then explains the mysteries of the science. The polyhedral shape of crystals for example can bring mathematical precision to the science. Haüy notes the easy separation of natural substances into stones, salts, bitumens, and metals, the quick recognition of crystals, the artificial and purely empirical classification of minerals, by their external characters, combined with a few simple reactions, as the effervescing of carbonates, the later systems of Cronstedt, Bergman, Born, Kirwan, etc., when analysis usurped the place of mere inspection. He emphasizes the importance of distinguishing varieties, as in calcite, a conviction he incorporated into his description of the minerals. He also illustrates the value of analysis in alluding to the mineral smithsonite that was first regarded as a zeolite, later as heavy spar, and then shown conclusively by chemical analysis to be a salt of zinc.

REFERENCES: Dana's 7th (Bibliography): 73. • *Freilich Sale Catalog*: no. 232. • *Honeyman Sale*: 4, 1627. • *Hoover Collection*: no. 391. • *Ward & Carozzi, Geology Emerging*, 1984: no. 1022.

2123. 2nd edition, 1822-3: Traité | de | Minéralogie, | Par M. l'Abbé Haüy, | [...12 lines of titles & memberships...] | Seconde Edition, | Revue, Corrigée, et Considérablement Augmentée | par l'auteur. | Tome Premier. | [tapered rule] | Paris, | Bachelier, Libraire, Successeur de M^{me} Ve Courcier, | Quai des Augustins. | 1822.

[TITLE OF ATLAS:]



TRAITÉ DE MINÉRALOGIE, 1822

Traité | de Minéralogie, | Par M. l'Abbé Haüy. | [rule]
| Distribution Méthodique des Minéraux, Nomenclature
des Cristaux, Tableaux des | Mesures d'Angles, Figures
Géométriques. | Atlas. | [rule] | Seconde Édition. |
[rule] | Paris, | Bachelier, Libraire, successeur de M^{me} V^e
Courcier, Quai des Augustins, N^o 55. | [double rule] |
1823.

4 vols. and atlas. [VOL 1] 8^o: a-c⁸ 1-37⁸ 38¹; 320^l.;
[i]-xlvi, [1]-592 p. Mispaginations: 66 as 96 and 349 as
549.; [VOL 2] 8^o: π⁸ 2-38⁸ 39² 40²; 307^l.; [1]-613, [1] p.;
[VOL 3] 8^o: 1-37⁸; 296^l.; [1]-592 p.; [VOL 4] 8^o: 1-38⁸ χ¹.;
305^l.; [1]-604, [6] p.; [Atlas] Oblong 4^o: π² 1-6⁴ 7⁴; 29^l.;
[4], [1]-54 p., 120 plates.

CONTENTS: [Vol 1] [i-ii], Half title page, "Traité | de |
Minéralogie," verso "De l'Imprimerie de Huzard-Courcier,
| rue du Jardin-Saint-André-des-Arcs, N^o 12."; [iii-iv],
Title page, verso blank.; [v]-xlvi, "Discours Préliminaire.";
[1]-592, Text.; [2 pgs], "Table Des Matières Du Tome
Premier."

[Vol 2] [1-2], Half title page, "Traité | de |
Minéralogie," verso "De l'Imprimerie de Huzard-Courcier,
| rue du Jardin-Saint-André-des-Arcs, N^o 12."; [3-4],
Title page, verso blank.; [5]-610, Text.; [611]-613, "Table
Des Matières Du Tome Deuxième."; [1 pg], Blank.

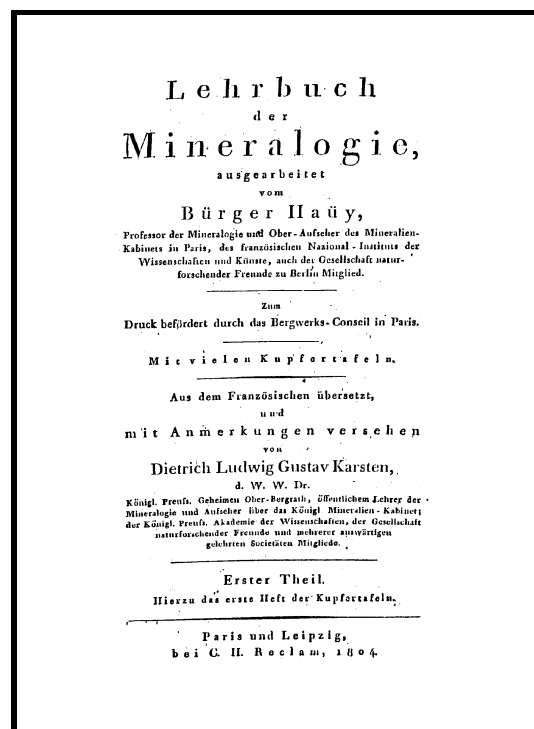
[Vol 3] [1-2], Half title page, "Traité | de |
Minéralogie," verso "De l'Imprimerie de Huzard-Courcier,
| rue du Jardin-Saint-André-des-Arcs, N^o 12."; [3-4],
Title page, verso blank.; [5]-590, Text.; [591]-592, "Table
Des Matières Du Tome Troisième."

[Vol 4] [1-2], Half title page, "Traité | de |
Minéralogie," verso "De l'Imprimerie de Huzard-Courcier,
| rue du Jardin-Saint-André-des-Arcs, N^o 12."; [3-4],
Title page, verso blank.; [5]-582, Text.; [583]-584,
"Table Des Matières Du Tome Quatrième."; [585]-604,
"Table Alphabétique Des Matières."; [4 pgs], Liste Des
Souscripteurs.; [1 pg], Errata for all 4 volumes.; [1 pg],
Blank.

[Atlas] [2 pgs], Half title page, "Figures Géométriques
| Du | Traité de Minéralogie | De M. Haüy," verso blank.;
[2 pgs], Title page, verso blank.; [1]-10, "Distribution
Méthodique des Minéraux, par Classes, Ordres, Genres et
Espèces."; [11]-27, "Nomenclature des Cristaux."; 28-54,
"Tableaux des Mesures d'Angles, ..."

RARE. A considerably revised, corrected and enlarged
version of the first edition. It provides a general treatise
on mineralogy taking up half of the first volume, with the
remainder being the beginning of a systematic descriptive
mineralogy which extends through volume four. The last
volume also contains an index to the entire work and a list
of subscribers. The atlas plates show some mineralogical
apparatus and many hundreds of crystal drawings.

REFERENCES: BL. • CBN. • Cole, *Chemical Literature*,
1988: no. 613. • Dana's 7th (Bibliography): 73. • NUC:
[NH 0186120].



LEHRBUCH DER MINERALOGIE, 1804

2124. German transl., 1804-10: Lehrbuch | der | Mineralogie,
| ausgearbeitet | vom | Bürger Haüy, | [...4 lines of titles
& memberships...] | [rule] | Zum | Druck befördert durch
das Bergwerks-Conseil in Paris. | [rule] | Mit vielen
Kupfertafeln. | [tapered rule] | Aus dem Französischen
übersetzt, | und | mit Anmerkungen versehen | von |
Dietrich Ludwig Gustav Karsten, | d. W. W. Dr. | [...5
lines of titles & memberships...] | [rule] | Erster Theil. |
Hierzu das erste Heft der Kupfertafeln. | [tapered rule] |
Paris und Leipzig, | bei C. H. Reclam, 1804.

[TITLE PAGE OF ATLAS:]

Lehrbuch der Mineralogie, | ausgearbeitet | vom | Herrn
Haüy, | [...2 lines of titles and memberships...] | [rule]
| Zum | Druck befördert durch das Bergwerks - Conseil
in Paris. | [rule] | Aus dem Französischen übersetzt |
und | mit Anmerkungen vermehrt herausgegeben | von |
Dietrich Ludwig Gustav Karsten, | [...2 lines of titles and
memberships...] | und | Christian Samuel Weiss, | ordentl.
öffentl. Professor der Mineralogie auf der Universität zu

HAÜY

Berlin u.s.w. | [rule] | Fünfter Theil, | enthaltend Tabellen über die Kennzeichen und das System der Mineralien und 86 Kupfertafeln. | [rule] | Paris und Leipzig, | bei C.H. Relam, 1810.

4 vols. and atlas. [VOL 1: 1804] 8°: π^8 22 1-388 392; 316 ℓ .; [i]-xx, [1]-611, [1] p.; [VOL 2: 1804] 8°: π^8 22 1-458 466; 376 ℓ .; [i]-xx, [1]-723, 9 p.; [VOL 3: 1806] 8°: π^8 B⁸ 1-438; 360 ℓ .; [i]-xxxii, [1]-686, [2] p.; [VOL 4: 1810] 8°: π^4 1-458 464 474; 372 ℓ .; [i]-viii, [1]-734, [2] p.; [Atlas: 1810] Oblong 4°: π^{12} ; 12 ℓ .; [24] p., 86 plates (I Taf. - LXXXVI Taf.). PAGE SIZE: (Text) 200 x 122 mm., (Atlas) 210 x 238 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-xx, "Vorrede | des | Ueberstzers."—signed Karsten, 5 October 1803.; [1]-611, Text.; [1 pg], "Druckfehler im Text."

[Vol 2] [i-ii], Title page, verso blank.; [iii]-xx, "Vorrede | zum | zweiten Theile der Uebersetzung."; [1]-710, Text.; [711]-723, "Nachtrag. | Ueber die Krystallisation des Feldspathes. | Von | C.S. Weiss."; [6 pgs], Errata to volume 1.; [3 pgs], Errata to volume 2.

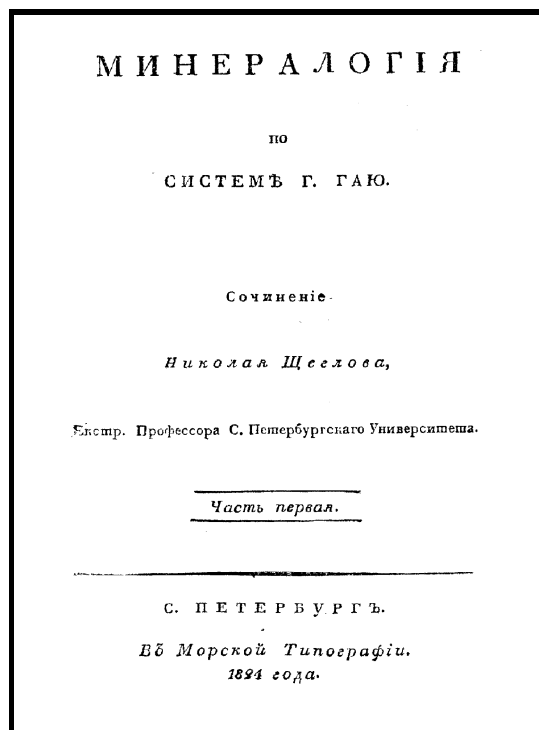
[Vol 3] [i-ii], Title page, verso blank.; [iii]-xxiv, "Vorrede | zum | dritten Theile."; xxv-xxxii, "Anmerkungen | zu | der geometrischen Abtheilung | des zweiten Theils."; [1]-686, Text.; [1 pg], "Berichtigungen."; [1 pg], Blank.

[Vol 4] [i-ii], Title page, verso blank.; [iii]-viii, "Vorrede."—signed C.S. Weiss, 1810.; [1]-734, Text.; [1 pg], Berichtigungen von Druckfehlern.; [1 pg], Blank.

[Atlas] [2 pgs], Title page, verso blank.; [1 pg], "System Der Kennzeichen | Der | Mineralien."; [1 pg], Blank.; [18 pgs], Text.; [1 pg], "Geometrische Figuren."; [1 pg], Blank.; [At end], 86 plates.

VERY RARE. Translation by DIEDRICH LUDWIG GUSTAV KARSTEN and CHRISTIAN SAMMUEL WEISS of *Traité de Minéralogie* (1st ed., 4 vols and atlas, Paris, 1801).

REFERENCES: LKG: XII 157a.



MINERALOGIA, 1824

2125. Russian transl., 1824: Минералогія | По | Системѣ Г. Гаю. | Сочиненіе | Николай Щеглова. | Експр. Профессора С. Петербургскаго Университета. | [short rule] | Часмъ перван. | [short rule] | [tapered rule] | С. Петербургъ. | Въ Морской Типографіи. | 1824 года.

2 vols. [VOL 1] 8°: π^1 1-78 83 21-268 279; 117 ℓ .; [2], [1]-118, [1]-104, [1]-8, [2] p.; [VOL 2] 8°: π^1 1-178; 137 ℓ .; [2], [1]-230, [1]-XL, [2] p. PAGE SIZE: 204 x 122 mm.

CONTENTS: [Vol 1] [2 pgs], Title page, verso "Пегаманъ нозволяемся | ..."; [1]-2, "Предисловіе"—signed Николай Щеглова, 20 Іюля 1823 [=preface, signed Nikolay Shcheglova, 20 July 1823]; [3]-114, Text.; [115]-118, "Систематическое Расположеніе. | Описанія Минераловъ."; [1]-104, "Описаніе Минеральныхъ Видовъ."; [1]-8, "Оглавленіе" [contents]; [2 pgs], "Погрѣшности."

[Vol 2] [2 pgs], Title page, verso "Пегаманъ нозволяемся | ..."; [1]-230, Text.; [1]-XL, "Оглавленіе" [table of contents and index]; [2 pgs], "Погрѣшности."

VERY RARE. Abstracted translation by the St. Petersburg University professor of physics Nikolay P. Shcheglova [1793-1831] of *Traité de Mineralogie* (2nd ed., 4 vols., Paris, 1822). This work helped popularize crystallographic studies in Russia.

REFERENCES: Carver, V.M. Severgin, 1977: p. 222.

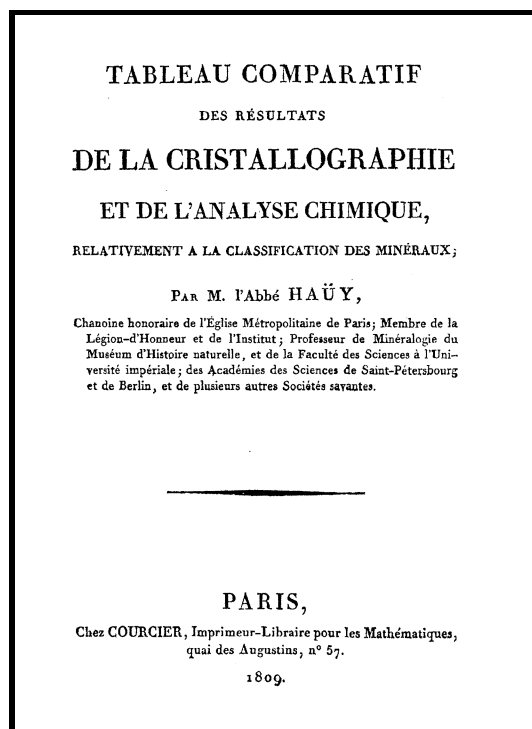


TABLEAU COMPARATIF, 1809

2126. — French, 1809.

Tableau Comparatif | des Résultats | de la Cristallographie | et de l'Analyse Chymique, | Relativement a la Classification des Minéraux; | Par M. l'Abbé Haüy, | [...5 lines of titles]

& memberships...] | [tapered rule] | Paris,
| Chez Courcier, Imprimeur-Libraire pour les
Mathématiques, | quai des Augustins, n° 57. |
1809.

8°: [4], [i]-lvi, [2], [1]-312 p., 4 folding plates.

CONTENTS: [2 pgs], Half title page, "Tableau Comparatif | des Résultats | de la Cristallographie | et de l'Analyse Chimique, | Relativement à la Classification des Minéraux." verso blank; [2 pgs], Title page, verso list of works by Haüy; [i]-xxxiv, "Introduction."; xxxv, "Explication des abréviations employées dans ce Tableau comparatif."; xxxvi-xl, "Table des espèces décrites dans cet ouvrage."; [xli]-xlvi, "Table des noms Français."; [xlix]-lvi, "Table des noms allemands."; [1]-120, "... Première Partie. Distribution méthodique des Espèces minérales déterminées principalement à l'aide de la Cristallographie."; [121]-312, "Seconde Partie. Notes relatives aux Résultats de l'analyse et à différents points de philosophie minéralogique."; [At end], 4 folding plates.

SCARCE. In 1809, Haüy issued his *Tableau Comparatif*, which had the stated objective that it would give those who had followed his course of lectures a complete tabulation of his mineralogical methods, updated to include the discoveries and observations the science had gained since the publication of his *Traité de Minéralogie* (Tableau, p. i).

Yet the *Tableau Comparatif* was more than a mere compendium of recent mineralogical statistics. Since the publication in 1801 of the *Traité*, Haüy's theories had come increasingly under attack. Specifically, his fundamental concept that every definite crystalline form or "molecule integrant" is characteristic of only one substance of definite chemical composition, and conversely that every substance of definite chemical composition can occur in only one definite crystalline form, drew Haüy into the Proust/Berthollet controversy about fixed versus variable proportions in chemical compositions.

Haüy's insistence upon the "molecule integrant" being the unique, fixed criteria for determining every mineral species lead him to implicitly accept the chemical law of fixed proportions long before Proust had declared it (Hooykaas, 1952). This position was in direct opposition to Berthollet, who believed that chemical composition was not fixed as Proust and Haüy claimed, but rather was of a variable nature. Therefore, in his 1803 *Essai De Statique Chimique*, Berthollet assailed Haüy's ideas about fixed mineral species in an elaborate note (*Essai*, 1, 433-449; Hooykaas, 1952). In answer to Berthollet's criticisms Haüy wrote the *Tableau Comparatif* which defended his position on the "molecule integrant" and its importance in uniquely defining a mineral species.

The book is divided essentially into two parts. The first is a "Methodical distribution of mineral species principally determined with the aid of crystallography," while the second is titled, "Notes relating to the results of the analyses and other points on the philosophy of mineralogy."

REFERENCES: Dana's 7th (Bibliography): 73. • DSB: 6, 178-83 [by R. Hooykaas]. • *Freilich Sale Catalog*: no. 234. • Goodman, *Problems in Crystallography*, 1969: 16 (1969), no. 3, 152-166. • Honeyman Sale: 4:1628. • Hooykaas, R.,

"Torbern Bergman's crystal theory," *Lychnos*, 1952, 21-54: 5 (1952), 45-55. • Ihde, *Development of Modern Chemistry*, 1964: 95-101 [general background on the Berthollet/Proust controversy.]. • *Journal de Physique*: 69 (1809), 56-77 [by J.C. Delamétherie]. • Leonard's *Taschenbuch*: 5 (1809), 346. • LKG: XII 158b. • Mausekopf, *Crystals and Compounds*, 1976. • NUC: 235, 195-6. • Oldroyd, *Phlogistic Mineralogical Schemes*, 1974: 426-30. • Partington, *History of Chemistry*, 1961-70: 4, 203. • Schütt, *Entdeckung des Isomorphismus*, 1984: 98-104. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1025. • Wellcome Catalog (Books): 3, 224.

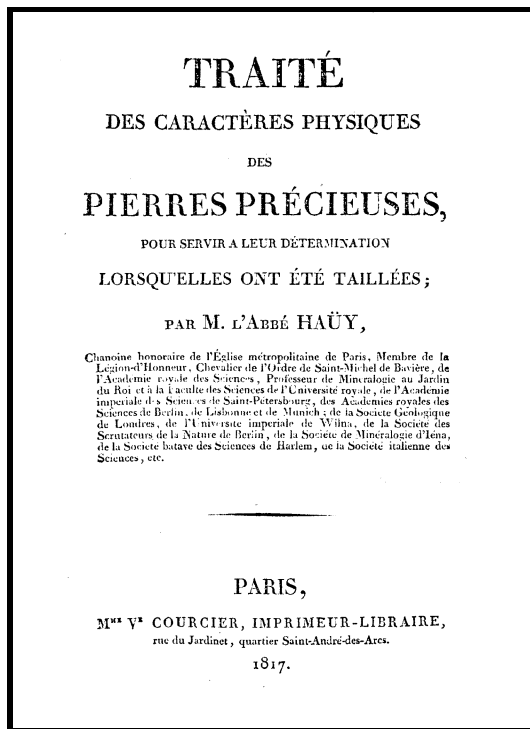
2127. — German, 1811.

Ueber die Elektrizität der Mineralkörper. Frankfurt am Main: J.C. Hermann, 1811.

8°: [2], iv, 25 p.

VERY RARE. First separate edition, translated by CARL CÄSAR RITTER VON LEONHARD from "Sur l'Électricité des Minéraux," *Annales du Muséum d'Histoire Naturelle* 15 (1810). This work describing the pyroelectricity phenomenon as observed by Haüy is the monograph's only separate appearance and contains many remarks added by the translator.

REFERENCES: LKG: X 10.



TRAITÉ DES CARACTÈRES PHYSIQUES, 1817

2128. — French, 1817.

Traité | Des Caractères Physiques | Des | Pierres
Précieuses, | Pour Servir A Leur Détermination
| Lorsqu'elles Ont Été Taillées, | par M. l'Abbé
Haüy, | [...10 lines of titles and memberships...] |

HAÜY

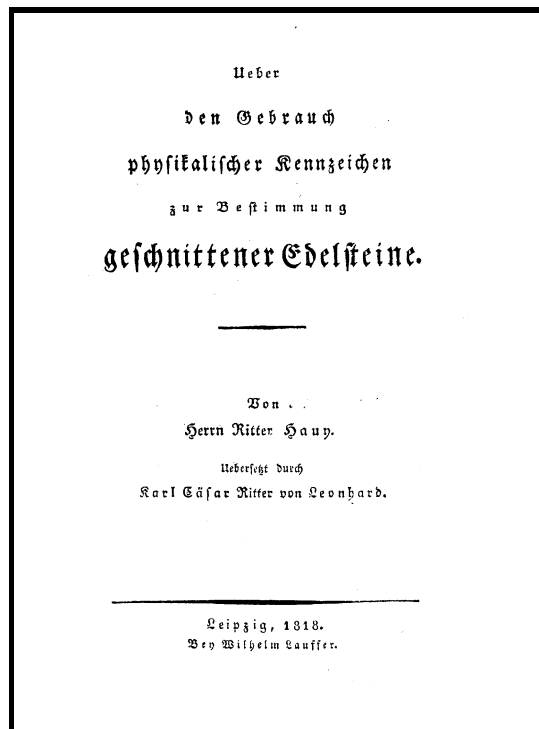
[tapered rule] | Paris, | M^{ve} Ve Courcier, Imprimeur–Libraire, | rue du Jardinot, quartier Saint–André–des Arcss. | 1817.

8°: π^8 1-17⁸ 182; 146 ℓ .; [i]-xvj, [i]-xxij, [1]-253, [1] blank p., 3 folding plates. PAGE SIZE: 218 x 132 mm. uncut.

CONTENTS: [i-ii], Half title page, “Traité | Des Caractères Physiques | Des | Pierres Précieuses,” verso “De L’Imprimerie De Mme Ve Courcier.”; [iii-iv], Title page, verso blank.; [v]-xvj, “Table Alfabétique | Des Matières | Contenues Dans Ce Traité.”; [i]-xxij, “Introduction.”; [1]-253, Text.; [1 pg], Blank.; [At end], 3 folding plates.

PLATES: The work contains 3 folding engraved plates numbered Pl. I–III. The depictions show apparatus and crystal drawings. All are signed Cloquet Sculp and are 218 x 280 mm.

VERY SCARCE. A landmark book in the science of gemology, described by Sinkankas (1994) as “the first determinative gemology worthy of the name.” This book marks a transition from earlier descriptive lapadaries to works based on scientific studies. The volume describes the crystallography and physical properties of various gemstones, and characterizes how these qualities might be used in identifying a stone, whether rough or cut. To facilitate this an identification table is provided. The three plates show various crystal forms, a Nicholson’s hydrometer (used for measuring specific gravity) and other laboratory apparatus for testing electrical properties.



UEBER DEN GEBRAUCH PHYSIKALISCHER, 1818

2129. German transl., 1818: Ueber | den Gebrauch | physikalischer Kennzeichen | zur Bestimmung | geschnittener Edelsteine. | [tapered rule] | Von | Herrn Ritter Haüy. [sic] | Uebersetzt durch | Karl Cäsar Ritter von Leonhard. | [tapered rule] | Leipzig, 1818. | Bey Wilhelm Lauffer.

[FIRST SECTIONAL TITLE PAGE:]

Ueber | den Gebrauch | Physikalischer Kennzeichen | zur Bestimmung | der | Edelsteine. | [tapered rule] | 1.

[SECOND SECTIONAL TITLE PAGE:]

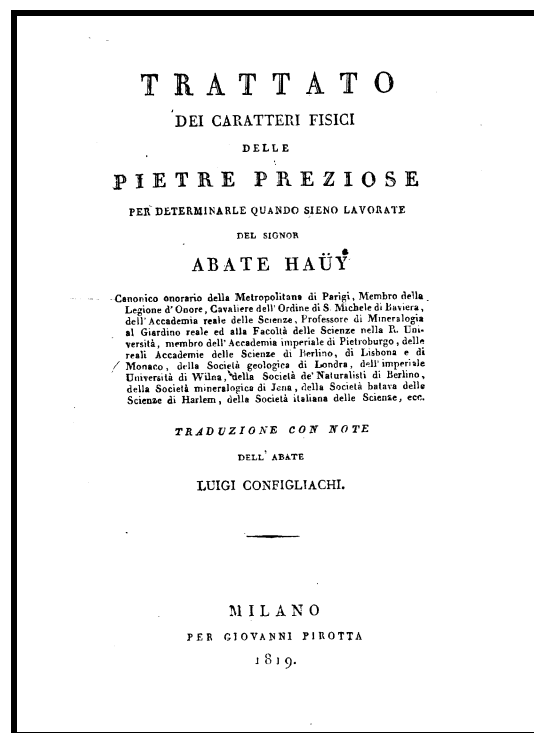
Uebersicht | der | Edelsteine | mit Angabe ihrer bezeichnenden Merkmale.

8°: π^2 1-3⁸ 42; 28 ℓ .; [4], [1]-51, [1] blank p. PAGE SIZE: 210 x 135 mm. uncut.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], Preface, dated 1 January 1818.; [1], Sectional title page.; [2], Blank.; [3]-30, Text.; [31], Sectional title page.; 32-51, Tables.; [1 pg], Blank.

RARE. First separate edition, translated by CARL CÄSAR RITTER VON LEONHARD. This work first appeared in French as “???” in the *Annales du Muséum d’Histoire Naturelle* 3 (1817?), p. 353. This is the work’s only separate appearance and contains many remarks added by the translator. It describes the determination of the physical characters of precious stones.

Sinkankas (1994) believes this to be an abridged translation of Haüy’s work on precious stones.



TRATTATO DEI CARATTERI FISICI, 1819

2130. Italian transl., 1819: Trattato | Dei Caratteri Fisici | Delle | Pietre Preziose | Per Determinarle Quando Sieno Lavorate | Del Signor | Abate Haüy | [...10 lines of titles and memberships...] | Traduzione Con Note | Dell’ Abate | Luigi Configliachi. | [tapered rule] | Milano | Per Giovanni Pirota | 1819.

8°: *6 B⁸ 1-14⁸ 152; 132 ℓ .; [i]-xxxvi, [1]-227, [1] p., 3 folding plates. PAGE SIZE: 220 x 145 mm.

CONTENTS: [i-ii], Half title page, "Trattato | Dei Caratteri Fisici | Delle | Pietre Preziose," verso blank.; [iii-iv], Title page, verso blank.; [v-vi], "Avviso | Del Traduttore."; [vii-xvii], "Tavola Alfabetica."; xviii, "N.B. Le note segnate coi ..."; [xix-xxxvi], "Introduzione."; [1]-227, Text.; [1 pg], Errata.; [At end], 3 folding plates.

PLATES: The work contains 3 folding engraved plates, numbered T. I-III and signed G. Pezze inc. These are new versions of the original French impressions.

RARE. Translation by Luigi Configliachi [see note below] of *Traité des Caractères Physiques des Pierres Précieuses* (Paris, 1817). The text begins with an advertisement from the translator, followed by an alphabetical index to the mineral species treated in the text. The premission of the printer precedes the introduction. The text then presents the species in Haüy's arrangement.

Luigi [Pietro] Configliachi. (BORN: 1767; DIED: 1864) Italian mineralogist.

[BIOGRAPHY NEEDED]



EBENMAASSGESETZ, 1819

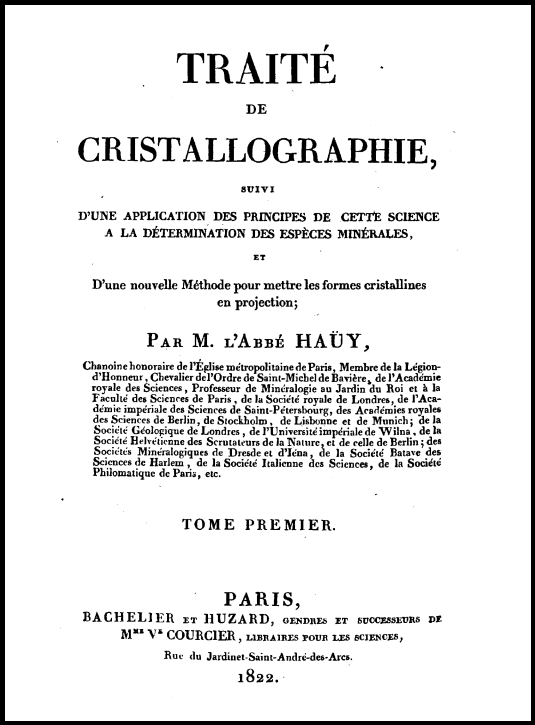
2131. — German, 1819.

Haüy's | Ebenmaassgesetz | der | Krystall-Bildung. | Uebersetzt | und | mit Anmerkungen begleitet | von | Dr. F.C. Hessel, | ordentliches auswärtiges Mitglied der mineralogischen | Societät zu Jena. | [rule] | Mit einer Vorrede | von | C.C. Ritter von Leonhard. | [wavy rule] | Frankfurt am Main, | in der Hermannschen Buchhandlung | 1819.

8°: xvi, 115 p., 2 colored plates.

RARE. This work deals with the theorized mechanism for how crystals develop symmetry. It is a translation by JOHANN FRIEDRICH CHRISTIAN HESSEL, with a forward by CARL CÄSAR RITTER VON LEONARD of "Mémoire sur une loi de Cristallisation, appelée loi de Symétrie," *Mémoire du Muséum d'Histoire Naturelle*, 1 (1815), 81-101, 206-25, 273-98, 341-52. This paper was also reprinted in *Journal des Mines*, 37 (1815), 215-35, 347-69, & 38 (1816), 5-34, 161-74.

REFERENCES: Burckhardt, *Symmetrie der Kristalle*, 1988: 20-24 [reproduces the title page]. • NUC: [no copy listed].



TRAITÉ DE CRISTALLOGRAPHIE, 1822

2132. — French, 1822.

Traité | de | Cristallographie, | suivi | d'une application des principes de cette science | a la détermination des espèces minérales, | et | D'une nouvelle Méthode pour mettre les formes cristallines | en projection; | Par M. l'Abbé Haüy, | [...11 lines of titles & memberships...] | Tome Premier. | Paris, | Bachelier et Huzard, gendres et successeurs de | M^{me} V^e Courcier, libraires pour les sciences, | Rue du Jardin-Saint-André-des-Arcs. | 1822.

[TITLE PAGE OF ATLAS:]

Traité | de Cristallographie; | Par M. l'abbé Haüy. | [wavy rule] | Atlas. | [wavy rule] | Paris, | Bachelier et Huzard, Gendres et Successeurs de

HEBENSTREIT

M^{me} V^e Courcier, | Libraires pour les Sciences, |
Rue du Jardinot-Saint-André-Des-Arcs, N^o 12. |
1822.

2 vols. and atlas. [VOL 1] 8^o: π^2 a-d⁸ e⁴ 1-388;
342 ℓ .; [4], [i]-lxxij, [1]-607, [1] blank p.; [VOL 2] 8^o: π^2
1-408 414 422; 328 ℓ .; [4], [1]-650, [1] errata, [1] blank p.;
[Atlas] Oblong 2^o: [2] p., 84 plates.

CONTENTS: [Vol 1] [2 pgs], Half title page, "Traité
| de | Cristallographie.," verso blank.; [2 pgs], Title
page, verso blank.; [i]-lxvj, "Introduction.;" [lxvij]-lxxij,
"Table Alphabétique | des Matières | contenues dans les
deux volumes.;" [1]-605, Text.; [606]-607, "Table | des
Principaux Articles | Contenus dans ce Volume.;" [1 pg],
Blank.;

[Vol 2] [2 pgs], Half title page, "Traité | de |
Cristallographie.," verso blank.; [2 pgs], Title page, verso
blank.; [1]-647, Text.; [648]-650, "Table | des Principaux
Articles | Contenus dans ce Volume.;" [1 pg], Errata.;

[Atlas] [2 pgs], Title page, verso blank.; [84 ℓ .], 84
plates numbered 1-84.

VERY SCARCE. Haüy's last work containing the
culmination of his studies in crystallography. It greatly
enlarges the number of species described, but the theory
first published in his *Essai d'une Théorie* (Paris, 1784)
remains essentially the same. Haüy also recognizes
hemitropical crystals (so named by him, but first
observed by Romé de l'Isle).

REFERENCES: Dana's 7th (Bibliography): 73. • LKG:
XII 156.

HEBENSTREIT, Johann Ernst. (BORN: Neustadt-
Orla, Germany, 15 January 1702; DIED: Leipzig,
Germany, 5 December 1757) *German physician,
botanist & natural historian.*

From 1719, Hebenstreit studied the subjects of
medicine and natural history at the Universities of Jena
and Leipzig. At Leipzig in 1728 he was awarded the
degree of master of philosophy, and in 1730 he graduated
as a doctor of medicine based upon the dissertation, *De
viribus mineralium et mineralium medicamentosis* (Leipzig,
1730). While at Leipzig, Hebenstreit had come under
the influence of August Quirinus Rivinus [1652-1723], who
introduced him to the field of botany. Upon his graduation,
Hebenstreit found a position at the royal botanical gardens
of the city. On behalf of Saxon King August II, Hebenstreit
along with five companions, including Christian Gottlob
Ludwig [q.v.], travelled from 1731 to 1733 on an extended
expedition throughout North Africa. Their task was
to collect natural history specimens as well as living
animals, and bring them back to Leipzig. Upon the
expeditions return, Hebenstreit took over as ordinary
professor of physiology at the University of Leipzig. When
the opportunity arrived, he also moved in succession to
the professorships of anatomy and surgery, pathology and
therapy.

Hebenstreit published works deal mostly with the
anatomical and physiological aspects of medicine. His
writings are based upon practical experience, and his
Anthropologia Forensis (Leipzig, 1751) is among the first
publications to show a connection between forensic
medicine and the law. Hebenstreit was also interested
in ancient medicine as it compared to his contemporary
knowledge. He authored *Erklärung Greich. Wörter von
Krankheiten des menschlichen Körpers* (1st ed., Leipzig,
1751), which is a glossary explaining Greek words that
describe diseases of the human body. In natural history,
Hebenstreit attempted to improve the system of plant
classification by dividing plants based upon their fruits,
and he devised a system for crustaceans and fish after their

outer organs. Hebenstreit was voted a membership to the
Leopoldian Akademie in 1731.

REFERENCES: ADB: 11, 196. • Börner, *Vornehmsten
Lebensumständen*, 1749-64. • *Biographie Universelle*: 23,
683-85. • DBA: I 491, 26-92; II 539, 168-169. •
Fischer, *Mineralogie in Sachsen*, 1939: 53, 63, 72, 109,
110, 212, 220 & 291. • Grosse, M., "Die beiden
Afrika-Forscher J.E. Hebenstreit und Ch.G. Ludwig,"
Mitt. d. Ver. für Erdkunde zu Leipzig, 1901-2, 1-87.
• Hirsch, *Biographisches Lexikon*, 1884-8: ??, 101. •
Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. •
Jöcher, *Gelehrten-Lexikon, Supplement*. • Kobell, *Geschichte
der Mineralogie*, 1864: 66. • Lambrecht & Quenstedt,
Catalogus, 1938: 193. • NDB: 8, 168 [by G. Uschmann].
• *Nova Acta Eruditorum*: 1759, 179-92. • *Nova Acta II*:
1761, appendix pp. 437-52. • Poggendorff: 1, cols. 1042-
3. • Schröter's *Journal für die Liebhaber*: 4, 118-28. • WBI.
• Weber, K.v., "Eine sächsischen Afrikaexpedition," *Archiv
für die Sächsischen Geschichte*, 3 (1865), 1-50.

2133. Dissertation, 1730: Q.D.B.V. | De | Viribus Mineralium
| Et Mineralium | Medicamentosis | Gratosae Favittatis
Medicae | Lipsiensis Indultu | Praeside | Viro Excellenti
Experientissimo | Domino | Ioan. Casparo Kvchlero |
[...2 lines of titles] | Pro Licentia | Honores In Medicina
Doctorales | Impetrandi | D.V. Maii MDCCXXX. |
Disputabit | M. Ioan. Ernestvs Hebenstreit | Neostad. Ad
Orilam Variscvs. | [rule] | Lipsiae | Literis Io. Christiani
Langenhemii.

4^o: [1]-47, [1] blank, [16] p.

VERY SCARCE. Hebenstreit's doctoral dissertation
with J.C. Kuchler as respondent. It contains a description
of the medical virtues and uses of minerals. An oration
by the physician Michael Ernst Ettmüller [1673-1732] is
appended at the end.

J.C. Kuchler. (BORN: ; DIED:) .

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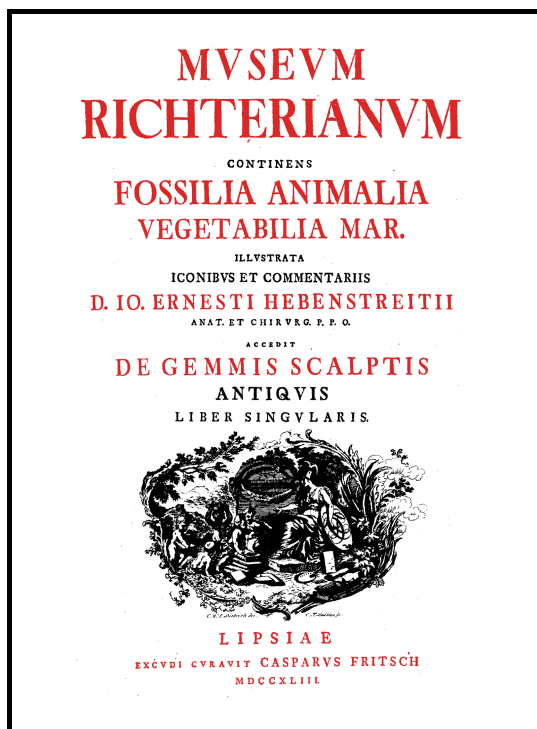
REFERENCES: BL: [B.417.(2.)]. • Gatterer, *Mineralo-
gischen Literatur*, 1798-9: 1, 237, no. 5. • Wellcome Catalog
(Books): 3, 229. (Kuchler)

2134. — Latin & German, 1743.

[In red:] Mvsevm | Richterianvm | [in black:]
Continens | [in red:] Fossilia, Animalia | Vegetabilia
Mar. | [in black:] Illvstrata | Iconivvs Et
Commentariis | [in red:] D.Io. Ernesti Hebenstreitii
| [in black:] Anat. Et Chirvrg. P.P.O. | Accedit |
[in red:] De Gemmis Scalptis | [in black:] Antiquis
| Liber Singvlaris. | [vignette] | [in red:] Lipsiae |
excvdī cvravit Casparvs Fritsch | MDCCXLIII.

2^o: π^2 (a)-(n)² A-Z² 2A-2Z² 3A-3Z² 4A-4Z² 5A-
5D² (A)-(N)²; 246 ℓ .; [1]-56, [1]-384, [18], [1]-34 p.,
folding engraved frontispiece (interior of the museum),
18 engraved plates. Title in red and black. Plates occur
facing pages [Intro] 16, [Text] 5, 19, 24, 35, 56, 75, 87,
95, 105, 123, 168, 170, 251, 381, [Christ] 1, 9 & 16.
PAGE SIZE: 405 x 248 mm.

CONTENTS: [1-2], Half title page, "Mvsevm |
Richterianvm," verso blank.; [Folding plate showing the
interior of the museum.]; [3-4], Title page, verso blank.; [5],
Initial dedication to Friderico Christiano.; [6], Blank.; [7]-
[10], Text of dedication signed "Io. Christophorvs Richter,"
3 May 1743 [date in Roman numerals.]; [11]-16, "Lectori
Benevolo | S.P.D. | Iohannes Christophorvs | Richter.;"
[Engraved portrait of Richter.]; [17]-50, "De | Fossilium
Ordinibus | Commentatio. | Abhandlung | Von denen
Lintheilungen | ausgegrabener Körper." [Text in double
column in Latin and German.]; 51-56, A series of letters



MVSEVM RICHTERIANVM, 1743

praising Richter's collection. These are signed, Io. Iacobvs Mascov, Ioannes Fridericvs Henckel, Fridericvs Menzivs and Ioh. Frider. Christ.; [1]-384, Text in double column in Latin and German.; [2 pgs], Title page to Christ's work, verso blank.; [16 pgs], "Ad Lectorem." [Preface to Christ's work]; [1]-34, Text in double column in Latin and German.

VERY SCARCE. A lavish book, describing and illustrating the minerals, fossils, gems and other objects of natural history contained in the collection of Johann Christoph Richter [see note below]. Richter had studied in his youth philosophy and literature; however, he succumbed to family wishes and pursued a successful career in business, which included dealing with glass making sands and coloring agents. Curious about the origins of the products he sold, Richter traveled to the mines that produced the agents. There he had his first introduction to the mineral specimens that he would spend the remainder of his life collecting. Richter wrote in the preface to this book: "The collection ... grew from day to day, to such an extent that it became necessary to sort the specimens into categories and arrange them on shelves and in display cabinets. As the number of shelves kept growing, my love for these things grew also, so that after a while, whatever time I had left over from the management of my personal or business affairs, I dedicated to their study and care" (Wilson (1994). Fortunately, Richter decided that some record of his collection and its organization should be preserved so that others might learn from his experience. For this purpose the services of Johann Ernst Hebenstreit were

retained to write the systematic catalog and Christian Friedrich Boëtius [see note below] to illustrate the book with faithful engravings. The resultant book is *Mvsevm Richterianvm*.

The volume begins with a dedication to Saxon Prince Friedrich Christian and Richter's preface describing the development of his collection and the preparation of the catalog. Following this is a detailed discussion of the development of natural history collecting and systematic mineralogy. For this Hebenstreit draws upon earlier authorities and books by Pliny, Dioscorides, Aldrovandus, Henckel, Agricola, Gesner, Woodward, Linnaeus, Theophrastus, Caesalpinus, Mercati, etc. Ordered by the principal metal contained, the minerals and ores are then methodically discussed. Each metal is covered in its own chapter, with the different mineral species and varieties that contain the metal listed underneath. Other chapters cover the sulfides, bitumen, salts, clays, "earths," quartz, and the gems. In each chapter after the systematic presentation, Richter's specimens are described with notes about association, habit and locality. Following the large mineralogical section of the work, other objects of Richter's collection are described. Included are marble, fossils, and preserved biological specimens. Finally, appended at the end and illustrated by three plates is a dissertation concerning the antique gem cameos contained in Richter's collection by Johann Friedrich Christ [see note below]. This work is titled: *Mvsei Richteriani Dactyliotheca Gemnas Scalptas Opere Antiquo Plerasque Complexa Interprete Ioh. Frider. Christo*. It follows the main treatise by Hebenstreit and may have in its history been separately issued as its own book. For further information on Christ and this work see, Sinkankas, J.S. (1993): nos. 1297 and 1831.

A significant feature of *Mvsevm Richterianvm* are the splendid plates. These include a large folding engraved frontispiece showing the interior of the museum, a full page portrait of Richter engraved after a 1739 painting by M. Bernigerothi and thirteen other plates realistically depicting 114 fine mineral specimens from Richter's collection. Two states of these plates exist. The most common issue are the uncolored which for their early date outshine many black and white mineral illustrations of later centuries. The second much rarer state is when the plates are superbly colored. More than likely, these were colored using the specimens themselves as models because very few colored mineralogies show the realistic, 3-dimensional quality present in almost everyone of the illustrations. Unfortunately, no information has been uncovered pointing to the colorist who tinted the plates, but with their skill, they created what is perhaps the finest hand-colored mineralogy.

Facsimile reprint, 1990: Prepared by The Mineralogical Record, Tucson, Arizona.

Johann Friedrich Christ. (BORN: 1701; DIED: 1756)
German philosopher & poet.

Johann Christoph Richter. (BORN: 1689; DIED:

HEDDLE

1751) *German banker & mineral collector*. A wealthy Leipzig banker, he built a large mineral collection of 2,309 specimens, plus gems, rocks, fossils and botanical examples for a total of 5,631 items in all. The museum was sold in 1751, with a few specimens being acquired by JOHANN HEINRICH LINCK.

Christian Friedrich Boëtius. (BORN: Leipzig, Germany, 1706; DIED: Dresden, Germany, 1782) *German copper engraver*. Boëtius was born the son of a bookseller and auctioneer. At an early age he was apprenticed to the Leipzig goldsmith Johann Friedrich Lauch. Boëtius was further artistically trained at the Zeichenakademie in Leipzig, where he remained four years. His highly developed skill as a copper plate engraver soon provided him with a steady flow of customers in Leipzig; however, sometime after 1736, Boëtius accepted a position in Dresden as court etcher and instructor at the local art academy. He remained there until his death.

REFERENCES: *Beiträge zur Naturgeschichte sonderlich des Mineralreichs*: 2, 129. • Cobres, *Deliciae Cobresianae*, 1782: 1, 110-1 ["Prächtig, geschätzt und classisch."]. • Fischer, *Mineralogie in Sachsen*, 1939: 275-6. • Freiesleben, *Sächsisches Mineralien-Verzeichnisse*, 1828: no. 9. • Freilich Sale Catalog: no. 236. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 262. • *Göttingische gelehrte Anzeigen*: 1743, 543. • Hoover Collection: no. 392. • Murray, *Museums*, 1904: 1, 146 & 3, 127 ["Some copies are on large paper in which the plates are coloured by hand."]. • Schröter's *Journal für die Liebhaber*: 4, 118-28. • Sinkankas, *Gemology Bibliography*, 1993: no. 2831. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1033. • Wilson, *History of Mineral Collecting*, 1994: 94-5, 97 & 190. (Christ) ADB. • *Nouvelle Biographie Générale* (Hofer). (Richter) DBA: I 1033, 73-76; II 1070, 222. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon, Supplement*. • Poggendorff: 2, col. 634. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 190. (Boëtius) Thieme & Becker, *Allgemeines Lexikon*, 1907-50: 4, 209-10 [by A. Kurzweily].

Historiae naturalis fossilium caput de terris. Gratosae facultatis medicae indultu praeside D. Ioanne Ernesto Hebenstreit ... pro licentia summos in Medicina honores impetrandi Lipsiae ipsis calend. Oct. An. MDCCXLV disputat Io. Georgius Lutherus ... (Lipsiae, 1745).

See: *Lutherus, Johann Georg*.

Progressionis de ordinibus gemmarum verbis C. Plinii, ex ejus naturalis historiae lib. 37, qui totus de gemmis est. (Lipsiae, 1747).

See: *Plinius Secundus (Pliny), Gaius*.

Dissertatio de usu Hydrargyri interno. (Lipsiae, 1735).

See: *Sartorius, ()*.

HEDDLE, Matthew Forster. (BORN: Melsetter, in Hoy, Orkney, Scotland, 1828; DIED: Edinburgh, Scotland, 19 November 1897) *Scottish chemist & mineralogist*.

Heddle graduated with an M.D. from the University of Edinburgh in 1851. When he attended the University of Edinburgh, Heddle took R. JAMESON's lectures on natural history topics. While he was practicing medicine in Edinburgh, Heddle became interested in mineralogy and geology, particularly as they related to his native land. Around 1856, he was appointed assistant professor of chemistry at the University of St. Andrews. He became a full professor in 1862, and continued to teach until his retirement in 1885. It is recorded that Heddle used a portion of his income to purchase equipment and supplies for the mineralogical laboratory at St. Andrews. Heddle decided early in his career to focus his considerable energy on the study of mineralogy in Scotland. To this purpose, he made many excursions throughout the country, collecting minerals. Even the most remote deposits were accessible to his unflagging energy and ingenuity. As a consequence, Heddle amassed a large collection of minerals and agates,



HEDDLE

particularly rich in Scottish localities. The collection is now housed in the Royal Scottish Museum, Edinburgh. Heddle was elected a Fellow of the Royal Society of Edinburgh and president of the Geological Society of Edinburgh in the year 1851. He was also elected President of the Mineralogical Society of Great Britain in 1879.

REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 116. • BBA: I 536, 146. • Cleavelly, *World Palaeontological Collections*, 1983: 148. • *Encyclopaedia Britannica*, 11th edition: 13, 196. • Livingstone, *Minerals of Scotland*, 2002: p. 60-6, portrait. • *Mineralogical Magazine*: 12 (1900), 38-41. • *Nature*: 57 (1897), 83-4. • Poggendorff: 3, 603 & 4, 603. • Sarjeant, *Geologists*, 1980: 2, 1229. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 711. • *Science*: 6 (1897), 876. • Thomas, *Dictionary of Biography*, 1884. • *Transactions of the Edinburgh Geological Society*: 7 (1897), 317, portrait. • WBI.

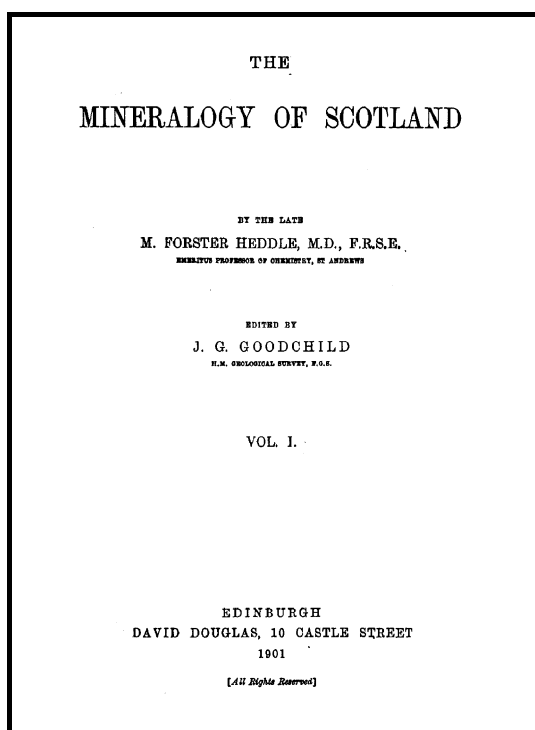
2135. — English, 1901 [First edition].

The | Mineralogy Of Scotland | By The Late | M. Forster Heddle, M.D., F.R.S.E. | Emeritus Professor Of Chemistry, St Andrews | Edited By | J.G. Goodchild | H.M. Geological Survey, F.G.S. | Vol. I. [-II.] | Edinburgh | David Douglas, 10 Castle Street | 1901 | [All Right Reserved].

2 vols. [VOL 1] 8°: [i]-li, [1]-148 p., frontispiece portrait of Heddle, 51 plates, numerous text figures; [VOL 2] 8°: [1]-192 p., plates 52-103, numerous text figures. PAGE SIZE: 246 x 142 mm.

CONTENTS: [Vol 1] [i-ii], Half title page, "The | Mineralogy Of Scotland," verso "Printed by Neill and Company, Limited, Edinburgh | for | David Douglas | ..."; [Frontispiece], Portrait of Heddle.; [iii-iv], Title page, verso blank.; [v], Dedication to Mrs. Heddle.; [vi], Blank.; [vii]-ix, "Preface."—dated 30 January 1901.; [x], Blank.; [xi]-xiii, "Memoir Of Dr Heddle | By Alexander Thoms."; [xiv], Blank.; [xv]-xvi, "Contents Of Volume I."; [xvii]-xviii, "List Of Illustrations To Volume I."; [xix]-xxiii, "Systematic List Of Minerals."—by J.G. Goodchild.; [xxiv]-xxvi, "Alphabetical List Of Minerals."—by J.G. Goodchild.; [xxxvii]-xlix, "Scottish Pseudomorphs | By James Currie, M.A."; [xlix], "Index Of Scottish Palaeosomatic Minerals." [pseudomorphs]; [li], "Scottish Minerals Arranged Under Counties."; [1]-148, Text.; [At end], 51 plates numbered I-LI.

[Vol 2] [i-ii], Half title page, "The | Mineralogy Of



THE MINERALOGY OF SCOTLAND, 1901

Scotland," verso "Printed by Neill and Company, Limited, Edinburgh | for | David Douglas | ..."; [Frontispiece], "Coroneted Pyrites."; [iii-iv], Title page, verso blank.; [v]-vi, "Contents Of Volume II."; [vii]-viii, "List Of Illustrations To Volume II."; [Plate] "Orthoclase."; [1]-192, Text.; [193]-212, "Supplement."; [213]-247, "Synoptic Index To Scottish Mineral | Localities."; [248], "Errata."; [At end], 52 plates numbered LII-CIII.

VERY SCARCE. This unsurpassed compilation of Scottish minerals is among the best topographical mineralogies yet written. It was the product of the author's lifelong desire to publish a comprehensive work on the mineralogy of his homeland, but at his death the manuscript remained unfinished. The notes were left to Alexander Thoms, who placed the work of completion in the competent hands of the mineralogist John George Goodchild [1844-1906].

Goodchild's responsibility was to sift through the mass of detail recorded in the notes and with as little alteration as possible create the two volumes of the present work. It must have been difficult. Many of the localities were laborious to identify, having been phonetically spelt by Heddle in his early journeys and not existing on any maps. Further, it was not clear what specimens related to the many figures the author had created, or what is the meaning of their symbols. Heddle was a competent draughtsman, and there are no less than 103 plates each containing about eight figures that accompany the two volumes. However, many of these figures come from other sources, having been redrawn by Heddle, with no clear indication as

to their value in the identification of Scottish species. Goodchild not knowing the importance of the drawings, decided to include them all.

In addition to the plates, a remarkable feature of the book are a number of beautiful and elaborate stereographic and gnomonic projections drawn by Wilbert Goodchild. The only book prior to *The Mineralogy of Scotland* that had included such illustrations was Alfred Louis Olivier Legrand Des Cloizeaux's [q.v.] *Manuel de Minéralogie* (2 vols. & atlas, Paris, 1862-93), and they are not as elaborate as those in the present work.

Volume one begins with Thoms memoir on the life and accomplishments of Heddle, and progresses through systematic and alphabetical lists of Scottish minerals. James Currie has added a complete list of Scottish pseudomorphs. Concluding the introductory material is an index of minerals arranged according to the counties where they are found. The bulk of the work is then presented. This is a descriptive mineralogy arranged upon a chemical classification of the just over 200 mineral species found in Scotland. Every locality where the species is known to occur is enumerated. The description includes the kind of rock in which the mineral occurs, and a statement of other associated species. In addition, an account of the crystalline forms and of the physical and chemical properties is given for each species. Under some minerals can be found an interesting historical commentary. Goodchild has also added greatly to the work's value by the inclusion at the end of a very complete synonymic index of locality names, in which he has taken great pains to give the exact situation of the place.

REFERENCES: Dana's 7th (Bibliography): 73. • *Mineralogical Magazine*: 21 (1928), 24. • *Nature*: ?? (August, 1901), 395.

2136. 2nd edition, 1923-4: The | Mineralogy Of Scotland | By The Late | M. Forster Heddle, M.D., F.R.S.E. | Emeritus Professor Of Chemistry, St Andrews | Edited By | J.G. Goodchild | H.M. Geological Survey, F.G.S. | Reprinted | Under Authority Of | Alex. Thoms, Esq. | By | The Council Of University College, Dundee | Assisted By | D.E.I. Innes, M.A., M.C. | Lecturer In Geology In The University Of St. Andrews. | Vol. I. [-II.] | St. Andrews | W.C. Henderson & Son, Church Street, 1923 [-1924] | [All Rights Reserved].

2 vols. [VOL 1] 8°: [i]-lviii, [1]-148 p., frontispiece portrait of Heddle, 55 plates, 30 text figures. [VOL 2] 8°: [i]-lviii, [1]-250 p., 52-103 plates, 9 pages of plate description.

VERY SCARCE. Essentially, this is a reprint of the original 1901 edition with only very slight alterations. The most prominent difference is the different frontispiece in volume two.

REFERENCES: Dana's 7th (Bibliography): 73.

HEINITZ, Friedrich Anton von. (BORN: Dröschkau, Germany, 14 May 1725; DIED: Berlin, Germany, 15 May 1802) *German statesman & mining expert.*

Heinitz (or Heynitz) was a member of an important aristocracy family in Saxony. He attended the Universities of Dresden and Freiberg, where he studied mining and smelting. In 1765, he was put in charge of mining, smelting, and forestry in Saxony and immediately founded the Bergakademie Freiberg, now the oldest mining school in the world. He is considered as the reformer of the mining

HEINRICH

industry of Braunschweig, having reorganized the mining and metallurgical operations of Prussia.

REFERENCES: ADB. • DBA: I 500, 137-148 & I 534, 443-444. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Mager, Johannes, "Friedrich Anton von Heynitz (1725-1802). Streiflichter aus seinem Leben und familiären Umfeld," *Der Anschnitt*, 2003, Heft 1. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40: 1, ?? . • WBI.



ENTDECKUNG EINER DEM KREUZ=STEINE, 1780

2137. — German, 1780.

Entdeckung | einer dem | Kreuz=Steine | wesentlichen | Entstehungs=Art der Kreuz=Figur. | [rule] | An | Ge. Excellenz | den | Hochwohlgebohrnen Herrn | Friedrich Anton Freyherrn von Heynitz, | [...4 lines of titles and memberships...] | [ornament] | [rule] | Mit einer ausgemahlten Kupfer=Tafel. | [ornate rule] | Hamburg. | Bey Johann Philipp Christian Reuß.

4°: A-D⁴ E³; 19l.; [1]-38 p., engraved hand-colored frontispiece (cross-sections of Kreuz=Steine). PAGE SIZE: 220 x 180 mm.

CONTENTS: [1-2], Title page, verso blank.; [3]-38, Text.

VERY RARE. The realistically colored frontispiece shows a parchment covered with drawings of various "cross-stones" resting on top of a wooden cabinet, holding a specimen of the cross stone. The text describes the mineral, its occurrence, and use.

REFERENCES: NUC.

2138. — German, 1786 [First edition].

Abhandlung über die Produkte des Mineralreichs in den königlich-preussischen Staaten, und über die Mittel, diesen Zweig des Staats-Haushaltes immer mehr empor zu bringen. Berlin, Ben George Jacob Decker, 1786.

8°: [2], 113, [1] p.

RARE. Subjects: Mineral industries—Germany—Prussia. Manufactures—Germany—Prussia.

REFERENCES: BL. • NUC.

2139. French transl., 1786: Mémoire | Sur Les | Produits Du Regne Minéral | De La | Monarchie Prussienne | Et Sur | Les Moyens | De Cultiver Cette Branche | De L'Économie Politique. | [ornament] | [double rule] | á Berlin, | chez George Jacques Decker, imprimeur du roi. | MDCCLXXXVI.

4°: 38 p.

VERY RARE. A treatise on mineral production in Prussia with suggestions for its improvement; a German version appeared the same year. His first book, the *Essai d'Économie Politique* (Basel, 1785, which also appeared in German as *Tabellen über die Staatswirthschaft*, Leipzig, 1786), is a rare work of comparative economic theory, in which Heinitz illustrates four different aspects of a state's political economy.

REFERENCES: BL: [B.348.(2.)]. • LKG: XIV 741. • NUC.

HEINRICH, Placidus.

REFERENCES: Poggendorff: 1, col. 1051.

2140. — German, 1811-1820.

Die | Phosphoreszenz | der Körper | oder | die im Dunkeln bemekbaren Lichtphänomene | der anorganischen Natur, | durch einer Reihe eigener Beobachtungen und Versuche geprüft und bestimmt | von | Placidus Heinrich, | [...2 lines of titles and memberships...] | Erste Abhandlung | von der | durch Licht bewirkten Phosphoreszenz | der Körper. | [tapered rule] | Nürnberg, | im Verlage der Johann Leonhard Schrag'schen Buchhandlung. | 1811.

5 parts in one volume. [Part 1: 1811] 4°: xvi, 132 p.; [Part 2: 1812] 4°: x, [133]-312, [1] p.; [Part 3: 1815] 4°: 313-424 p.; [Part 4: 1820] 4°: 425-570 p.; [Part 5: 1820] 4°: 573-596 p.

RARE. The first section deals with phosphorescence from light, the second treats thermoluminescence, the third light from plants and animals, the fourth, luminescence from mechanical means, and the five light from chemical reactions.

REFERENCES: Harvey, *History of Luminescence*, 1957: p. 342-5. • LKG: X 9. • Zeitlin & Ver Brugge, Booksellers (Los Angeles): cat. ??, no. 135.

HELLE, P.C.A.

2141. — French, 1763 [Sale catalog].

Catalogue | De Différens | Effets Précieux, | Tant | Sur L'Histoire Naturelle, | Que Sur | Plusieurs Autres Genres | De Curiosités. | Par Le S.P.C.A. Helle. | [ornament] | A Paris, | Chez Prault, Quay De Gesvres. | [double rule] | M. DCC. LXIII.

12°: π^2 A-C¹² D⁶; ??l.; [2], [1]-80 (i.e., 82), [2] p., 3 leaves of plates. Pages 73-82 misnumbered as 71-80. PAGE SIZE: 185 x 104 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [2 pgs], "Advertissement."; [1]-80 (i.e., 82), Text.; [1 pg], "Approbation."—dated 2 November 1763.; [1 pg], Blank.

RARE. Sale catalog of [vente le vendredi 9 décembre 1763 & jours suivans chez M. Gallois]

HELLWIG, Christoph von. (BORN: Cölleda, Germany, 15 July 1663; DIED: Erfurt, Germany, 27 May 1721) *German physician.*

Wrote under the pseudonyms, Valentin Kräutermann, Gaspar Schroeder and Constant A. Herzberger.

REFERENCES: DBA: II 556, 361-362. • Hirsch, *Biographisches Lexikon*, 1884-8. • Poggendorff: I, col. 1058. • Sander, S., "Aufklärung vor der Aufklärung? Zum populärmedizinischen Werk des Arztes und Bestsellerautors Christoph von Hellwig (1663-1721)," *Medizinhistorisches Journal*, 34 (1999), nos. 3-4, ??-??. • WBI.

2142. — German, 1702.

Anmuthige | Berg=Historien/ | Worinnen | Die Eigenschaften und Nutz der | Metallen, Mineralien, Erden/ | Edel= und andern Steinen be= | schreiben/ | nebst | Curiösen Relationen, | Was vor denckwürdige Sachen an | unterschiedlichen Orten/ über und un= | ter der Erden/ vornehmlich | in der | Baumanns=Höhle | und | Brockels=Berge | zu sehen/ | Ans Licht gegeben | von | L. Christoph Hellwig, Colled. Thur. | P.L. Cæs. Phys. zu Tännstädt. | [rule] | Leipzig/ | Berlegts Friedrich Groschuff/ 1702.

8°: [14], 1-136 p., engraved frontispiece. RARE.

REFERENCES: BL: [977.a.27.]. • LKG: XII 7.

2143. — German, 1714 [First edition].

Exotica Curiosa, | Oder: | Curiöse und nützliche | Beschreibung | Derer | Ausländischen Dinge/ | Welche | aus dem Dreyfachen Natur=Reich/ als | Regno minerali, vegetabili & animali, in frem= | den Ländern gefunden/ und theils zum Nutz und Ge= | brauch/ theils nur zur Luft und Erstischung des Gemüths an uns | überbracht werden; Sampt ihrer Gestalt/ Ort/ Krafft und | Würckung/ etc. | Aus unterschiedlichen hochgelahrten Männer | Schrifften und eigener Erfahrung nach dem Al= | phabeta eingerichtet und in Druck gegeben. | Von | L. Christoph Hellwig/ Stadt=Physico | zu Tännstädt in Thüringen. | [ornament] | Franckfurt und Leipzig/ Bey Johann Christoph Stößels seel. Erben | in Erfurt/ 1714.

8°: [1]-151 p.

VERY RARE. Subjects: Curiosities and wonders—Early works to 1900.

REFERENCES: BL: [547.d.21.(1.)].

2144. — German, 1709 [First edition].

Neu eingerichtetes Lexicon pharmaceuticum, oder, Apotheker-Lexicon worinnen Teutsch-Lateinisch, und Lateinisch-Teutsch, beyde nach dem Alphabet, die Stücke, welche ex triplici Regnô, oder dreyfachem Natur-Reiche, als Regnô Minerali, Vegetabili, & Animali, in der Medicin, Apothecke und Chirurgie gebräuchlich, zu finden darbey auch die Praeparata, was von jedem Stück zu haben, nicht weniger die Vires und Doses gesetzt

worden, umb sich desto besser und leichter darein zu richten, vor die jenigen, welche der edlen Medicin, Apothecker-Kunst und Chirurgie zugethan nöthig vor andere aber, welche nicht dergleichen Profession, nützlich und annehmlich zu lesen und zu gebrauchen, mit sonderm Fleiss und Mühe also eingerichtet, und auf vieler Begehren nachmahls in Druck gegeben von L. Christoph Hellwigen, Stadt-Physico zu Tännstädt in Thüringen. Franckfurt und Leipzig, In Verlegung Johann Christoph Stössels, Buchhändlers in Erfurt, 1709.

8°:)(8 A-Y8 (leaf Y8 blank); ??ℓ.; [16], 350, [2] p. : illus. Title page printed in red and black. Leaf)(8, with ill. on verso, is folded to precede t.p. as frontispiece.

RARE. A large and comprehensive dictionary of pharmaceutical science, which includes descriptions of the techniques used to prepare the drugs as well as information on the therapeutic use of the drugs. The drugs were prepared from plant, animal, and mineral bases.

REFERENCES: Sallander, *Bibliotheca Walleriana*, 1955: II, 4286..

Historisch-medizinisches Regnum Minerale

2145. — German, 1717 [First edition].

[In black:] Historisch=Medizinisches | [in red:] Regnum Minerale | [in black:] Oder | Metallen- | Und | [in red:] Mineralien=Reich, | [in black:] Worinnen enthalten | [in red:] I. Eine accurate Beschreibung aller Metallen, | [in black:] Mineralien und Steinen/ sowohl edelen als unedel- | kostbaren und geringen/ &c. sambt deren vielerley Arten/ | Gestalt/ Farben und Orts/ wo sie wachsen und | gefunden werden/ | [in red:] II. Ein nöthiger Unterricht/ wie und was von | [in black:] jeden in der Medecin, Apothecke/ Mechanique | und Oeconomie mit Nutzen zu gebrauchen | sey/ | Worbey Denn | [in red:] Rare Experimenta, Curiosa | [in black:] und Historien von ausländischen und seltsamen | Sachen mit beygefüget worden/ | Mit Fleiß also zusammen getragen | Und mit nöthigen Registern ans Licht gestellet/ | Von | [in red:] Valentino Kräutermann/ | [in black:] Med. Pr. Thur. | [rule] | Franckfurt und Leipzig/ | [in red:] In Verlegung Ernst Ludwig Niedtens/ | [in black:] Buchhändlers in Arnstadt/ 1717.

8°:)(3 A-Y8 Z4; 183ℓ.; [6], [1]-352, [8] p., engraved frontispiece (landscape above and below a mine). Title page in red and black. PAGE SIZE: 170 x 102 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "Geneigter Leser."—dated 6 September 1716 [=foreword].; [1]-352, Text.; [8], "Register."

VERY SCARCE. The first portion of the text

describes minerals, rocks, stones, ores, etc. while the second part provides descriptions of techniques in assaying and metallurgy. Typical of the period, all types of mineralogical objects are described including such odd materials as fossils, figured stones, precious and semiprecious gems and other curiosities derived from the earth. Also included are recipes for manufacturing colored glasses and discussions of artificial gemstones. Basic facts are included in the descriptions such as localities, physical properties and uses in medicine and industry.

Christian von Hellwig published this work under the pseudonym Valentin Kräutermann.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 25.

2146. 2nd edition, 1726: Neu=vermehrtes Historisch=Medicinisches | Regnum Minerale, | Oder | Metallen= | und | Mineralien-Reich, | Und zwar anietzo in II. Haupt=Theilen/ | Da in dem Ersten enthalten | Eine accurate Beschreibung | Aller Ertze, Mineralien, Metallen und Edalgesteine, | wie sie wachsen und gefunden werden, und wo sie in der | Medicin und sonst zu gebrauchen. | Im Andern aber die vollkommene | Scheide= und Probier=Kunst, | Darinnen gehandelt wird, | Was Scheiden und Probieren sey, wie es vorzu= | nehmen, so wohl im nassen als trockenen Wege, wie die Ertze | nach ihrem Gehalt zu erkennen/&c. Samt etlichen raren Processen | und Experimenten/ | Nebst einem Anhang/ | In welchem alle zum Scheiden und Probieren gehörige Sa= | chen/ und wie solche zu verfertigen/ beschreiben werden. | Nebst nöthigen Register zum andern mal ans Licht gestellt | von | Valent. Kräutermann/Med. Pract. Thur. | [rule] | Frankfurt und Leipzig/ | Verlegts Ernst Ludwig Niedt, in Arnstadt, 1726.

8°: a⁷ A-Cg⁸; 247ℓ.; [14], [1]-472, [8] p., engraved frontispiece. Title page in red and black. PAGE SIZE: 172 x 106 mm.

CONTENTS: [Frontispiece.]; [2 pgs], Title page, verso blank.; [12 pgs], "Vorrede."; [1]-472, Text.; [8 pgs], "Register."

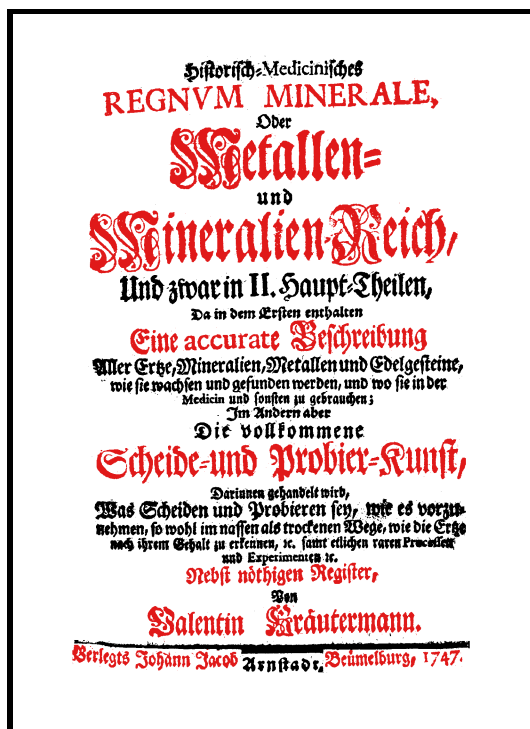
SCARCE. A revised edition, with many additions and expansions to the text. Christian von Hellwig published this work under the pseudonym V. Krautermann.

REFERENCES: BL: [1036.b.6.]. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 480. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 25. • LKG: XII 7a. • Sinkankas, *Gemology Bibliography*, 1993: no. 3575.

2147. 3rd edition, 1747: [in black:] Historisch=Medizinisches | [in red:] Regnum Minerale, | [in black:] Oder | [in red:] Metallen= | [in black:] und | [in red:] Mineralien-Reich, | [in black:] Und zwar in II. Haupt=Theilen, | Da in dem Ersten enthalten | [in red:] Eine accurate Beschreibung | [in black:] Aller Ertze, Mineralien, Metallen und Edalgesteine, wie sie wachsen und gefunden werden, und wo sie in der | Medicin und sonst zu gebrauchen; | Im Andern aber | Die vollkommene | [in red:] Scheide=und Probier=Kunst, | [in black:] Darinnen gehandelt wird, | Was Scheiden und Probieren sey, wie es vorzu= | nehmen, so wohl im nassen als trockenen Wege, wie die Ertze | nach ihrem Gehalt zu erkennen, &c. samt etlichen raren Processen | und Experimenten &c. | [in red:] Nebst nöthigen Register, | [in black:] Von | [in red:] Valentin Kräutermann. | [in black, rule] | [in red:] Verlegts Johann Jacob [in black:] Arnstadt, [in red:] Beümelburg, 1747.

8°: A⁷ 2A⁸ B-Z⁸ 2A-2G⁸; 247ℓ.; [14], [1]-472, [8] p., frontispiece (woodcut). Title in red and black. PAGE SIZE: 154 x 96 mm.

CONTENTS: [Frontispiece.]; [2 pgs], Title page, verso blank.; [12 pgs], "Vorrede."; [1]-220, "Erster Theil. | Von Metallen und | Mineralien."; 221-449, "Der andere Theil, | handelnd | Von denen vermischten Metallen, |



REGNUM MINERALE, 1747

wie solche nach der Kunst zu scheiden | und probiren. | und Scheiden dienenden Mit= | teln u."; [8 pgs], "Register | Derer hierinnen befindlichen vornehm= | sten Realien."

SCARCE. Christian von Hellwig published this work under the pseudonym Valentin Kräutermann. The text describes all aspects of mineralogy but with special attention paid to the medical benefits. The author describes historic uses of minerals and provides quite detailed commentary on specific species. These include the noble metals of silver and gold as well as the technological materials of copper, tin, lead, and zinc. Procedures for assaying ores are outlined and information on how to overcome purity problems are given. The frontispiece shows a woodcut scene of a mine with wench and ore hoist in the foreground and a scenic view in the background.

The text is divided into two parts. The first treats metals and their associated minerals and covers, gold, silver, copper, iron & steel, zinc, lead and mercury. The second provides methods for distinguishing between gold and silver by means of acids, heating, and combinations with other fluxes and compounds like antimony, lead and copper. Another section explains how to differentiate between gold and silver and the other metals like copper, iron, zinc, lead and mercury. Methods and procedures for assaying various ores are then presented.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 25. • Hoover Collection: no. 396. • LKG: XII 7a*.

2148. — German, 1717.

[In black:] Der accurate | [in red:] Scheider | [in black:] und künstliche | [in red:] Probierer, | [in black:] Welcher gründlich zeitget und beschreiber | [in red:] I. Die Erzeugung der Metallen und Minera= | [in black:] lien insgemein, samt deren

Erkenntniß. | [in red:] II. Was Scheiden und Probieren sey, auch | [in black:] wie solches vorzunehmen, sowohl im nassen | als trockenen Wege. | [in red:] III. Die Schmelztung und Probierung al= | [in black:] lerhand guter und geringer Ertze, nach ihren | eigentlichen rechten Gehalt, auch auf Gold und Silber. | [in red:] IV. Zum Probieren dienliche Mittel und | [in black:] Wege, als, Probier=Wagen, Gewichte, Ca- | pellen, &c. und deren Verfertigung, samt Bereitung | verschiedener scharffer, zum Schmelzen und Probieren | dienlicher Wasser, &c. | [in red:] Alles mit besonderm Fleiss zusammen getragen | [in black:] und mit nöthigen Registern ausgefertigt | Von | [in red:] Val. Kräutermann, Med. Pr. Thur. | [in black, rule] | Franckfurth und Leipzig, | [in red:] In Verlegung Ernst Ludwig Niedtens, | [in black:] Buch=Händlers in Arnstadt, 1717.

8°:)(7 A-U⁸; 167^l.; [14], [1]-311, [9] p., frontispiece (showing a landscape with a mine). Title in red and black.

CONTENTS: [2 pgs], Title page, verso blank.; [12 pgs], "Vorrede."; [1]-311, Text.; [9 pgs], "Register."

RARE. A treatment on metallurgy and analysis.

REFERENCES: BL: [1399.b.36.(1.)]. • Cole, *Chemical Literature*, 1988: no. 616. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 480. • Hoover Collection: no. 394. • NUC: [0262988].

2149. — German, 1730.

Compendieuses | Lexikon | Exoticorum & Materialivm, | Oder accurate | Beschreibung | Derer vornehmsten ausländischen | Ost= und West=Indianischen Materia- | lien und Vegetabilien, als: | Bäume/ Stauden/ Kräuter/ Blumen/ | Wurtzein, Schaaen, Kinden, Früchte &c. inglei= | chen derer Fossilien, Metallen, Mineralien, wie auch aller | ausländischen Thiere, Fische und Vögel &c. nach ihren | Nahmen, Eigenschafften, Kräfften, Nutzen | und Würckungen &c. | Alles mit besonderm Fleiß und Mühe aus den be= | sten Scrienten und Reise=Beschreibungen in Alphabeti= | scher Ordnung zusammen getragen, und mit einem | besondern Register versehen | von | Valent. Kräutermann/ Med. Pr. Thur. | [double rule] | Arnstadt/ | Verlegts Ernst Ludwig Niedt, 1730.

8°: [14], 552, [56] p., engraved frontispiece showing in five frames four human figures and the interior of a museum. Title in red and black.

VERY SCARCE. Actually authored by C. Hellwig, who used this pseudonym.

REFERENCES: BL: [957.1.25.]. • Hoover Collection: no. 395. • LKG: XIV 870.

HELSINGFORSIUS, Sigfrid Aronius.

See: Forsius (helsingforsius), Sigfrid Aronius.

HELWIG, Christoph. (BORN: Greifswald, Germany, 21 December 1679; DIED: Greifswald, Germany, 16 July 1714) *German physician*.

REFERENCES: DBA: I 509, 273-274; II 557, 369-370. • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, col. 1062. • WBI.

2150. Dissertation, 1705: *Dissertatio Physico-Medica Curiosa De Creta*. Quam ... Praeses, Christoph. Helvigius ... Respondens Carolus Helvigius ... Gryphiswaldiae, Adolphus, [1705].

4°: 54 p. VERY SCARCE.

REFERENCES: LKG: XVI 324.

2151. — Latin, 1714 [Dissertation].

De nomine rubricae Hebraeo, ac Carthaginensi rubrica Dioscoridis. Respondens Stefan Mozer. Gryphiswaldiae, Starcke, 1714.

4°: 34 p.

VERY SCARCE. Dissertation – Stefan Mozer, respondent.

Greifswald, Univ., Med. Diss., 1714

REFERENCES: LKG: XVI 257.

HELWING, Georg Andreas. (BORN: Angerburg, Germany, 14 December 1666; DIED: Angerburg, Germany, 3 January 1748) *German theologian*.

Helwing (or Helwig) was in his youth a docent at the University of Jena, before becoming the first priest of Angerburg in East-Prussia.

REFERENCES: DBA: I 509, 387-391; II 557, 400. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Lambrecht & Quenstedt, *Catalogus*, 1938: 197. • Poggendorff: 1, col. 1062. • WBI.

2152. — Latin, 1717-20.

[In red:] M. Georgii Andreæ Helwings/ | [in black:] [...2 lines of titles and memberships...] | [in red:] Lithographia | Angerbur- | gica, | [in black:] sive | Lapidum Et Fossi- | lium, | [in red:] In Districtu Angerburgensi et ejus vicinia, ad trium vel | quatuor milliarum spatium, | [in black:] In Montibus, Agris, Arenofodinis & in primis circa | lacuum littora & fluviorum ripas, | collectorum | brevis & succincta Consideratio | [in red:] Additis rariorum aliquot figuris æri incisis, | [in black:] cum Præfatione Autoris & Indicibus necessariis. | Veniet tempus, quô ista, quæ nunc latent, in lucem dies extrahet, | & logioris ævi diligentia, Seneca. | [rule] | Regiomonti, Literis Johannis Stelteri, MDCCXVII.

[TITLE PAGE OF PART 2 READS:]

[In red:] M. Georgii Andreæ Helwings, | [...in black, 2 lines of titles and memberships...] | [in red:] Lithographiæ | Angerburgicæ | [in black:] Pars II. | In Qva | De | [in red:] Lapidibus Figvratīs | [in black:] Ad Triplex Regnvm Minerale, Vegetabile | Et Animale Redactis, | Aliisque | [in red:] Fossilibus | [in black:] In Districtv Angerbvrgensi Ejvsqve | Vicinia Noviter Detectis, | Et In Specie | De | [in red:] Origine Lapidvm Literas Exprimētivm, | [in

HENCKEL

black:] Occasione Lapidis Cvjvsdam Resaviensis, |
literas latinas L.V.R. repræsentantis, | Svccincte
Disseritvr; | [in red:] Additis Iconibvs Rariorum.
| [in black:] Multa ferunt anni venientes commoda
secm. Horat. | [rule] | Lipsiæ, | Literis Immanuelis
Titii. 1720.

2 parts. [Part 1: 1717] 4°: [14], 96, [14] p., 11
folding plates, frontispiece view of Angerburg. Title in
red and black. [Part 2: 1720] 4°: 6 plates. VERY RARE.

REFERENCES: *Acta Eruditorum*: pp. 505-07 & (1718):
pp. 322-25. • Beekman, *Systematische Mineralogie*, 1906:
30. • BL: [431.a.22.(1.)]. • Fischer, *Mineralogie in Sachsen*,
1939: 94, 101 & 235. • Gatterer, *Mineralogischen Literatur*,
1798-9: 1, 24. • Hoover Collection: no. 398 [part one only].
• Lambrecht & Quenstedt, *Catalogus*, 1938: p. 197. • LKG:
XIV 738 & XVI 96.

HENCKEL, Johann Friedrich. (BORN: Merseburg,
Germany, 1 August 1678; DIED: Freiburg, Germany, 26
January 1744) *German mining expert.*

The son of the town physician, in 1698, Henckel
enrolled at the University of Jena to study theology;
however, he switched to medicine and in a few years
transferred to Dresden, where he opened a medical practice,
without obtaining an M.D. In 1711, he resumed his medical
studies at the University of Halle, taking an M.D. under
G.E. STAHL. Subsequently, Henckel relocated to the mining
town of Freiberg in Saxony. There he practiced medicine
for 18 years, becoming district physician in 1718 and
town physician and mine physician in 1721. For pleasure,
Henckel provided courses in chemistry and preformed
chemical experiments. This led to his publication of
several works important works [described below]. In 1730,
under the patronage of an influential noble, he resigned his
post. Eventually he was appointed councilor of mines, and
was able to establish a large laboratory in Freiberg. There,
he resumed his annual course in metallurgical chemistry,
teaching six students of a time. Among his distinguished
pupils were A.S. MARGGRAF and M.V. LOMONOSOV. This
course became renowned throughout Europe, and was
probably instrumental in the founding of the Freiberg
Bergakademie in 1765.

REFERENCES: ADB: 11, 760. • DBA: II 558, 223.
• Drugulin, *Sechstausend Portraits*, 1863: nos. 2378-80.
• DSB: 6, 259-60 [by K. Hufbauer]. • Herrmann, W.,
"Berggrat Henckel. Ein Wegbereiter der Bergakademie,"
Freiberger Forschungshefte, D-37 (1962), 218 pp. • Lambrecht
& Quenstedt, *Catalogus*, 1938: 197. • NDB: 8, 515-6 [by W.
Fischer]. • Partington, *History of Chemistry*, 1961-70: 2, 706-
7. • Poggendorff: 1, col. 1065. • Sarjeant, *Geologists*, 1980:
2, 1237. • Schiffner, *Alter Freiburger Bergstudenten*, 1935-40:
2, 9-10. • Wagner, *Mineralogisch Durchforschung Sachsens*,
1902: 92. • WBI. • *World Who's Who in Science*: 783.

2153. — German, 1722 [First edition].

Flora Saturnizans, | Die | Verwandschaft |
Des | Pflanzen mit dem Mineral= | Reich,
| Nach der Natural=Historie und Chymie |
aus vielen Anmerckungen und Proben | Nebst
einem | Anhang | vom | Kali Geniculato
Germanorum | oder Gegliederten Saltz=Kraut, |
Insonderheit | Von einer hieraus neu=erfundenen
dem allerschönsten | Ultramarin gleichenden |
Blauen Farbe/ | Angegeben von | D. Johann
Friedrich Henckel, | [...2 lines of titles and
memberships...] | [rule] | Leipzig, 1722. | Verglegets



FLORA SATURNIZANS, 1722

Johann Christian Martini/ | Buch=Händler in der
Nicolai=Strasse.

8°: [10], 671, [17] p., engraved frontispiece, 8
plates.

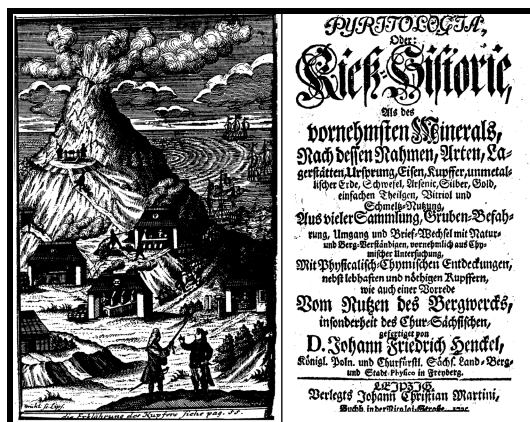
VERY SCARCE. Henckel's first work in which plants
and minerals are compared. Henckel recognizes the
alkali content of plants and using the techniques of
chemistry compares the formation of minerals to the
growth of plants.

REFERENCES: Hoover Collection: no. 399. • LKG:
XVII 159.

2154. 2nd edition, 1755: D. Joh. Friedrich Henckels, | [... one
line of titles and memberships...] | Flora Saturnizans,
| die | Verwandschaft | des | Pflanzen= | mit dem
| Mineralreich, | nach der Naturalhistorie und Chymie
| aus vielen Anmerckungen und Proben. | Nebst
einem Anhang | von | Kali Geniculato Germanorum |
oder gegliederten Saltzkraut, | insonderheit | von einer
hieraus neuerfundenen dem allerschönsten | Ultramarin
gleichenden | Blauen Farbe, | mit Kupfern. | [rule] |
Neue, verbesserte Auflage. | [ornate rule] | Leipzig, | in
der Großischen Handlung. | 1755.

8°: 608 p., frontispiece, plates. VERY SCARCE.

REFERENCES: LKG: XVII 159.



PYRITOLOGIA: ODER: KIESS-HISTORIE, 1725

2155. — German, 1725 [First edition].

Pyritologia, | Oder: | Kieß=Historie, |
 Als des | vornehmsten Minerals, | Nach
 dessen Nahmen, Arten, La= | gerstätten, Ur-
 sprung, Eisen, Kupffer, unmetall= | lischer
 Erde, Schwefel, Arsenic, Silber, Gold, | ein-
 fachen Theilgen, Vitriol und | Schmelz=Nutzung,
 | Aus vieler Sammlung, Gruben=Befah= |
 rung, Umgang und Brief=Wechsel mit Natur= |
 | und Berg=Vererständigen, vornehmlich aus
 Chy= | mischer Untersuchung, | Mit Physical-
 ish=Chymischen Entdeckungen, | nebst lebhaften
 und nöthigen Kupffern, | wie auch einer Vorrede
 | Vom Nutzen des Bergwercks, | insonderheit des
 Chur=Sächsischen, | gefertigt von | D. Johann
 Friedrich Henckel, | [...2 lines of titles and member-
 ships...] | [rule] | Leipzig, | Verlegt Johann Chris-
 tian Martini, | Buchh. in der Nicolai-Straße. 1725.

8°: [44], 1008, [32] p., frontispiece, 12 plates, title in red and black.

SCARCE. Henckel, director of the mining works at Freiberg, was called by Partington the “father of mineral chemistry.” In the famous *Kieshistorie* he has written a monograph on the single topic of pyrite. Henckel recognized three types: golden iron pyrites, golden copper pyrites and white arsenic pyrites. Within the body of the text, he proceeds to describe, experiment and speculate upon each of these types. Henckel uses physical properties such as hardness and crystal form, chemical composition including the amounts of sulphur, arsenic, copper, etc contained, and speculates on why pyrite is usually found in association with rich veins of ore. It is an encyclopedic work on the subject, and exerted a strong influence of subsequent investigators engaged in mineral analysis.

The attractive and charmingly primitive frontispiece depicts ore being transported from the mine to a smelting shed and other aspects of mining life. The plates depict pyrites in their various forms.

REFERENCES: Dana's 7th (Bibliography): 73. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 385-6. • *Freilich Sale Catalog*: no. 238. • Hoover Collection: no. 406. • LKG: XVI 315. • Partington, *History of Chemistry*, 1961-70: 2, 706-7.

2156. 2nd edition, 1754: D. Joh. Friedrich Henckels | Königl. Polnischen und Churfürstlich Sächsischen Bergraths | Pyritologia, | oder | Kieshistorie | als | des vornehmsten Minerals, | nach dessen Namen, Arten, Lagerstätten, | Ursprung, Eisen, Kupfer, unmetallischer Er= | de, Schwefel, Arsenic, Silber, Gold, ein= | fachen Theilgen, Vitriol und Schmelz= | nutzung, | Aus Sammlung, Grubenbefahrung, Brief= | wechsel, und chymischer Untersuchung, | Mit Physicalish=Chymischen Entdeckungen | und Kupfern | auch einer Vorrede | vom | Nutzen des Bergwercks. | [rule] | Neue verbesserte Ausgabe. | [ornate rule] | Leipzig | In der Großischen Handlung | 1754.

8°: A-Ll⁸ Mmm⁴; 460ℓ.; [28], [29]-904, [16] p., frontispiece, 12 plates (on six leaves). In two copies examined the half-title? (leaf A1) was missing. PAGE SIZE: 190 x 115 mm. uncut.

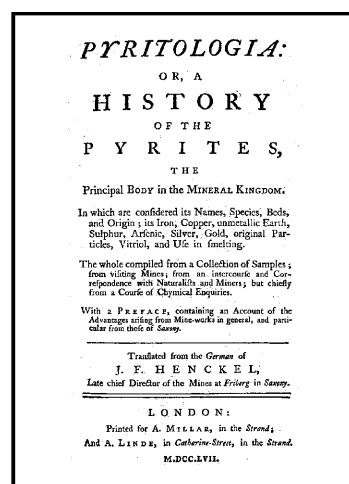
CONTENTS: [Frontispiece].; [2 pgs], Half title page,

verso blank(?). [missing from copy examined].; [2 pgs], Title page, verso blank.; [1 pg], “Erklärung des Titlekupfers.”; [1 pg], Blank.; [20 pgs], “Vorrede.”; [2 pgs], “Verzeichnis derer Capital.”; [29]-904, Text.; [16 pgs], “Register.”

VERY SCARCE. Second and improved edition of one of the author's major works; it is “an encyclopedic study of the pyrites...His work on pyrites and other minerals exerted a strong influence on J.H. Pott, J.G. Lehmann, and others engaged in mineral analysis.”—D.S.B., VI, p. 259. The first edition appeared in 1725 and there were later editions in 1757 and 1760.

The attractive and charmingly primitive frontispiece depicts ore being transported from the mine to a smelting shed and other aspects of mining life. The plates depict pyrites in their various forms.

REFERENCES: Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 288. • Ferchl: 225-6. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 386. • Hoover Collection: no. 406. • Partington, *History of Chemistry*, 1961-70: 2, 706.



PYRITOLOGIA, 1757

2157. English transl., 1757: Pyritologia: | Or, A | History | Of The | Pyrites, | The | Principal Body in the Mineral Kingdom. | In which are considered its Names, Species, Beds, | and Origin; its Iron, Copper, unmetalliferous Earth, | Sulphur, Arsenic, Silver, Gold, original Par- | ticles, Vitriol, and Use in smelting. | The whole compiled from a Collection of Samples; | from visiting Mines; from an intercourse and Cor- | respondence with Naturalists and Miners; but chiefly | from a course of Chymical Enquiries. | With a Preface, containing an Account of the | Advantages arising from Mine-works in general, and parti- | cular from those of Saxony. | [rule] | Translated from the German of | J. F. HENCKEL, | Late chief Director of the Mines at Freiberg in Saxony. | [double rule] | London: | Printed for A. Millar, in the Strand; | And A. Linde, in Catherine-Street, in the Strand. | M.DCC.LVII.

8°: A⁸ χ¹ B-Z⁸ 2A⁸ 2B⁷; 200ℓ.; [i]-xv, [3], [1]-376, [6] p., frontispiece (engraved; showing an erupting volcano and various mine buildings). PAGE SIZE: 202 x 122 mm.

CONTENTS: [Frontispiece].; [i-ii], Title page, verso blank.; [iii], “An Explication of the Frontis- | piece.”; [iv], Blank.; [v-vi], “Advertisement.”; [vii]-xv, “The | Author's Preface.”; [1 pg], Blank.; [2 pgs], “Contents.”; [1]-376, Text.; [6 pgs], “The | Index.”

PLATES: Frontispiece shows a scenic/idealized view of a volcano and mine next to the seaside. Text at the top, “Frontispiece to D.J.F. Henckels History of Pyrites.” Text at bottom, “The Explanation after the Title.”

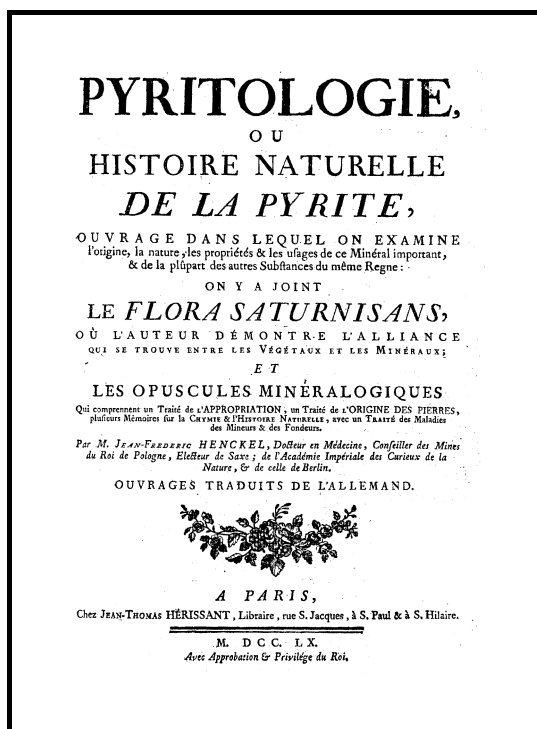
HENCKEL

SCARCE. Henckel, director of the mining works at Freiberg, has been called the "father of mineral chemistry." In the famous *Kieshistorie* he has written a monograph on the single topic of pyrite. Henckel recognized three types: golden iron pyrites, golden copper pyrites and white arsenic pyrites. Within the body of the text, he proceeds to describe, experiment and speculate upon each of these types. Henckel uses physical properties such as hardness and crystal form, chemical composition including the amounts of sulphur, arsenic, copper, etc contained, and speculates on why pyrite is usually found in association with rich veins of ore. It is an encyclopedic work on the subject, and exerted a strong influence of subsequent investigators engaged in mineral analysis.

The text is divided into 16 chapters. (1) Introduces the subject of the book and the method Henckel will use to explain the topic, (2) discusses the names of the pyrites, (3) distinguishes several species of pyrites, (4) beds (outcrops) of pyrites, (5) the production and generation of pyrites, (6) description of iron pyrites, (7) description of copper pyrites, (8) examines the unmetallic earths found in pyrites, (9) sulphur in pyrites, (10) arsenic in pyrites, (11) silver in pyrites, (12) gold in pyrites, (13) discusses theories of the formation of pyrites, (14) vitriol of pyrites, (15) explains several uses of pyrites, especially in reference to making sulphur, and (16) a history of Hessian pyrites, called Terra martis Hessiaca, communicated by M. Rosinus.

The attractive and charmingly primitive frontispiece depicts ore being transported from the mine to a smelting shed and other aspects of mining life. The plates depict pyrites in their various forms.

REFERENCES: Dana's 7th (Bibliography): 73. • Hoover Collection: no. 407. • LKG: XVI 317b.



PYRITOLOGIE, OÙ HISTOIRE NATURELLE, 1760

2158. French transl., 1760: Pyritologie, | ou | Historie Naturelle | De La Pyrite, | Ouvrage Dans Lequel On Examine | l'origine, la nature, les propriétés & les usages

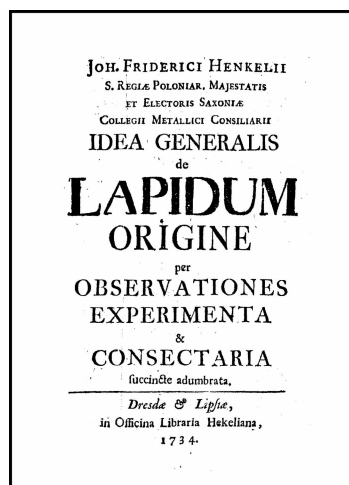
de ce Minéral important, | & de la plupart des autres Substances du même Regne: | On Y A Joint | le Flora Saturnisans, | Où l'Auteur Démontre l'Alliance | qui se trouve entre les Végétaux et les Minéraux; | Et | Les Opuscles Minéralogiques | Qui comprennent un Traité de l'Appropriation, un Traité de l'Origine Des Pierres, | plusieurs Mémoires sur la Chymie & l'Histoire Naturell, avec un Traité des Maladies | des Mineurs & des Fondeurs. | Par M. Jean-Frederic Henckel, Docteur en Médecine, Conseiller des Mines | [...2 lines of titles and memberships...] | Ouvrages Traduits De L'Allemand. | [ornament] | A Paris, | Chez Jean-Thomas Hérissant, Libraire, rue S. Jacques, à S. Paul & à S. Hilaire. | [double rule] | M. DCC. LX. | Avec Approbation & Privilège du Roi.

4°; a-b⁴ A-O⁴ P¹⁻³ *Q¹ Q²⁻⁴ R-Ddd⁴ Eee² A-Ttt⁴ Uuu²; [i]-xvi, [1]-403, [1], [1]-524 p., engraved frontispiece, 5 folding plates. PAGE SIZE: 258 x 186 mm.

CONTENTS: [i-ii], Half title page, "Œuvres | De | M. Henckel, | Traduites De L'Allemand," verso blank; [Frontispiece showing scenic view of a harbor and volcanoes (Vesuvius?).]; [iii-vi], Title page, verso blank; v-viii, "Avertissement | Du Traducteur."; ix-xiv, "Préface | De L'Auteur."; xv-xvj, "Explication | Des Figures."; [1]-396, Text of 'Pyritologie'; 397-403, "Table | Des Matieres."; [1 pg], "Approbation Privilege Du Roi."; [1-2], Sectional title page, "Flora Saturnisans," verso blank; [3]-15, "Préface."; [16], Blank; [17]-284, Text of 'Flora Saturnisans.'; [285], Sectional title page, "Traité | De | L'Appropriation."; [286], Blank; [287]-392, Text.; [393], Sectional title page, "Idée Générale | De L'Origine | Des Pierres."; [394], Blank; 395-455, Text of 'Idée Générale.'; [456], Blank; [457], Sectional title page, "Précis | D'Un Traité | Des Maladies."; [458], Blank; 459-487, Text.; [488], Blank; [489], Sectional title page, "Dissertations | Minéralogiques."; [490], Blank; 491-515, Text.; 516, "Explication Des Figures."; 517-524, "Table | Des Matieres."; [At end], 5 folding plates.

SCARCE. Translation by Baron d'Holbach of several works authored by Henckel. It comprises translations of his work on pyrites (1st ed., 1725), on the relationship between minerals and plants (1st ed., 1722), his Appropriation, his General Ideas on the Origin of Stones (1st ed., 1734), his Treatise on Maladies, and translations of his mineralogical dissertations.

REFERENCES: *Berlinische Sammlungen*: 9, p. 228. • Dana's 7th (Bibliography): 73. • Hoover Collection: no. 408. • LKG: XII 37 & XVI 316a.



IDEA GENERALIS, 1734

2159. — Latin, 1734.

Joh. Friderici Henkelii | S. Regiæ Poloniar.
Majestatis | et Electoris Saxonæ | Collegii
Metallici Consiliarii | Idea Generalis | de |
Lapidum | Origine | per | Observationes |
Experimenta | & | Consectaria | succincte
adumbrata. | [rule] | Dresdæ & Lipsiæ, | in Officina
Libraria Hekeliana, | 1734.

8°: π^1 A-E⁸ F⁶; 47 ℓ .; [2], [1]-15, 34-108 p. (i.e., 92,
owing to the omission of pages 16-33 in the sequence).
PAGE SIZE: 178 x 100 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-15,
34-108, Text.

RARE. Contains Henckel's general observations
and theories on the origin of minerals and stones.
The text is divided into three sections. The first
(pages 1-46) contains the observations. The second
(pages 46-74) describe various experiments Henckel
performed and their outcome. The third (pages 74-
108) discuss the consequences and describe in general
congealing and coalescing of stones, germination,
crystallization and petrification of animals and
vegetables. German translations of this work appear in
Kleine mineralogische und chymische Schriften (1744,
1756, and 1769).

REFERENCES: *Berlinische Sammlungen*: 8, 229. • Hoover
Collection: no. 402. • LKG: XIII 54. • Schröter's *Journal
für die Liebhaber*: 2, 66.

2160. — German, 1744 [First edition].

Kleine Mineralogische und Chymische Schrifften,
auf Gutbefinden des Herrn Autoris; Nebst einer
Vorrede von den Bergwercks-Wissenschaften zu
Vermehrung der Cammeral-Nütungen, und mit
Anmerkungen, herausgegeben von Carl Friedrich
Zimmermann. Dreseden und Leipzig, 1744.

8°: xlviii, 619, xlv p., 2 plates.

VERY SCARCE. Edited by Carl Friedrich
Zimmermann. Contains on pp. 1-312 "Appropriation,"
pp. 313-528 "Ursprung der Steine," and pp. 529-619
"Besondere Untersuchungen."

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1,
386. • *Freilich Sale Catalog*: no. 239. • *Gründig's Versuche*:
1, 171. • Hoover Collection: no. 403. • LKG: VI 11. •
Sinkankas, *Gemology Bibliography*, 1993: no. 2883.

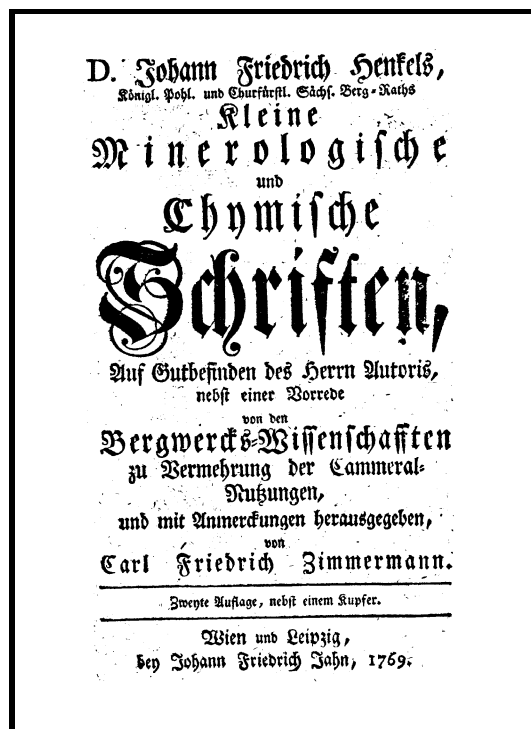
2161. 2nd edition, 1756: D. Johann Friedrich Henkels, |
[...one line of titles and memberships...] | Kleine |
Mineralogische | und Chymische | Schrifften, | Auf
Gutbefinden des Herrn Autoris, | nebst einer Vorrede |
von den | Bergwercks=Wissenschaften | zu Vermehrung
der Cammeral= | Nütungen, | und mit Anmerkungen
herausgegeben, | von Carl Friedrich Zimmermann. |
Zweyte Auflage. | [rule] | Dreßden und Leipzig, | bey
Friedrich Hekel, 1756.

8°: 619 p.

VERY SCARCE. Second edition, state one, edited by
Carl Friedrich Zimmermann.

REFERENCES: LKG: VI 11.

2162. 3rd edition, 1769: D. Johann Friedrich Henkels, |
[...one line of titles and memberships...] | Kleine |
Mineralogische | und Chymische | Schrifften, | Auf
Gutbefinden des Herrn Autoris, | nebst einer Vorrede |
von den | Bergwercks=Wissenschaften | zu Vermehrung



KLEINE, 1769

der Cammeral= | Nütungen, | und mit Anmerkungen
herausgegeben, | von Carl Friedrich Zimmermann. | [rule]
| Zweyte Auflage, nebst einem Kupfer. | [rule] | Wien und
Leipzig, | bey Johann Friedrich Jahn, 1769.

8°: a-c⁸ A-Z⁸ 2A-2S⁸ 2T³; 354 ℓ .; [48], [1]-619, [41] p.,
one folding plate. PAGE SIZE: 175 x 100 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [42 pgs],
"Vorrede."; [4 pgs], "Inhalt."; [1]-619, Text.; [41 pgs],
"Register."

VERY SCARCE. Second edition, state three, edited by
Carl Friedrich Zimmermann. Listed in NUC, and sounding
like a reprint of the 1769 edition with a new date on the
titlepage.

REFERENCES: LKG: VI 11.

2163. — German, 1747 [First edition].

Henckelivs In Mineralo- | gia Redivivvs, | Das
ist; | Hencklischer | aufrichtig und grundlicher
| Unterricht | von der | Mineralogie | oder |
| Wißenschaft | von | Waßern, Erdsäften, Saltzen,
| Erden, Steinen und Ertzten. | Nebst angefügten
Unterricht | von der | Chymia Metallurgica,
| Wie selbigen der Wohlseel. Herr Berg=Rath,
Joh. Friedrich Henckel, sowohl seinen in der
Mineralogie | und Chymie gehabten Scholaren
discursivè ertheilet, | als auch der Nachwelt zum
Dienst in Manu- | scripto hinterlaßen. | Zum
ansterblichen Andencken ediret | von | einem
dem Hencklischen Hause treu verbundensten | in
Erübrigten Stunden. | [rule] | Dreßden, bey Joh.
Nicol. Gerlachen. 1747.

HENCKEL

8°:)(7 A-U⁸ X⁴; 171ℓ.; [14], [1]-327, [1] p., frontispiece. PAGE SIZE: 172 x 104 mm.

CONTENTS: [Frontispiece].; [2 pgs], Title page, verso blank.; [7 pgs], Dedication, signed Johann Emanuel Stephani, 30 June 1746.; [5 pgs], "Glück auf! | Höchst= und Hochgeehrter | Leser."; [1]-118, Text.; [119], Sectional title page, "Pars Secunda | Henckelius in chymia redivivus, | Das ist | Hencklischer | deutlich und aufrichtiger | Unterricht | Von der | Chymia Metallurgica, | Dieses bestehet | in einer Vorerinnerung, | was Chymia sey."; 120-327, Text.; [1 pg], Blank.

VERY SCARCE. Edited by Johann Emanuel Stephani. A collected volume of Henckel's writings concerning mineralized waters, salts, earths, stones, silver, copper, zinc, lead, arsenic, iron, mercury, cobalt, antimony, etc. The first part of the book describes and identifies a wide variety of mineralogical specimens. The remainder of the volume deals with derivatives of gold, silver, copper, arsenic, lead and sulfur including descriptions of tinctures, amalgams, calcination, vitrification, etc.

REFERENCES: Ferchl: p. 226. • *Freilich Sale Catalog*: no. 240. • Hoover Collection: no. 401. • LKG: XII 35. • Partington, *History of Chemistry*, 1961-70: 2, 706-7.



HENCKELIVS IN MINERALOGIA REDIVIVVS, 1759

2164. 2nd edition, 1759: Henckelius | In Mineralogia Redivivus | Das ist | Hencklischer | aufrichtig und gründlicher | Unterricht | von der | Mineralogie | oder | Wissenschaft | Von Wassern, Erdsäften, Salzen | Erden, Steinen und Erzen | Nebst angefügtem Unterrichte | von der | Chymia Metallurgica | wie selbigen der wohlseilige Herr Bergrath, Johann | Friedrich Henckel, sowohl seinen in der Mineralogie | und Chymie gehaltenen Scholaren discursivè ertheilet, als | auch der Nachwelt zum

Dienst in Manuscripto | hinterlassen | Zum unsterblichen Andenken ediret, aufs neue über= | sehen, und mit einigen nach denen vorgefundenen Berg= | arten gemachten Anmerkungen hin und wieder vermehret | von | einem dem Hencklichen Hause ergebenstne | In Erübrigten Stunden | [rule] | Dresden, bey Johann Nicolaus Gerlach, 1759.

8°:)(7 A-X⁸ Y⁵; 180ℓ.; [14], [1]-344, [2] p., frontispiece, one folding plate (emaciated, dying human on a bed). PAGE SIZE: 178 x 100 mm. VERY SCARCE.

CONTENTS: [Frontispiece].; [2 pgs], Title page, verso blank.; [7 pgs], Dedication to Johann Christian Grafen von Hennicke, signed Johann Emanuel Stephan, 30 June 1746.; [5 pgs], "Glück auf! | Höchst= und Hochgeehrter | Leser!"; [1]-339, Text.; 340-344, "Erklärung | Einiger beym Probiren und der Chy= | mie vorkommenden Zeichen und | Abbreviaturen."; [1 pg], Blank.; [1 pg], "Erklärung des Kupferblatts."; [At end], One folding plate.

REFERENCES: LKG: XII 35.

2165. French transl., 1756: Introduction | A La | Mineralogie; | Ou | Connoissance | Des Eaux, | Des Sucs Terrestres, | des Sels, des Terres, | Des Pierres, Des Mineraux, | et des Métaux: | Avec une Description abrégée des opérations | de Métallurgie. | Ouvrage Posthume de M.J.F. Henckel, | publié sous le titre de Henckelius in Minera- | logiâ redivivus, & traduit de l'Allemand. | Tome Premier. | [ornate rule] | A Paris, | Chez Guillaume Cavelier, Libraire, | rue S. Jacques, au Lys d'Or. | [double rule] | M. DCC. LVI. | Avec Approbation & Privilège du Roi.

2 vols. [VOL 1] 12°: a-c¹² A-H¹² I⁶ K²; 140ℓ.; [i]-lxxii, [1]-204, [4] p.; [VOL 2] 12°: π¹ A-P¹² Q⁶; 187ℓ.; [2], [1]-371, [1] p.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-xj, "Vie | De M. Jean-Frederic | Henckel."; xij-xiv, "Liste | Des Ouvrages | De Monsieur | J.F. Henckel."; xv-xvj, "Table | Des Chapitres."; [xvii]-xxxvij, "Table | Des Matieres."; xxxvij-xlviij, "Table | Des Chapitres."; xlix-lxxij, "Table | Des Matieres. | Du Second Volume."; [1]-204, Text.; [3], "Approbations."; [1 pg], Blank.

[Vol 2] [2 pgs], Title page, verso blank.; [1]-371, Text.; [1 pg], Blank.

SCARCE. Translated by P.H.D. Baron d'Holbach, this work contains a life of Henckel and a list of his works.

REFERENCES: LKG: XII 36.

2166. — German, 1794-5.

Mineralogische chemische und alchymistische Briefe von reisenden und andern Gelehrten an den ehemaligen Chursächsischen Bergrath J.F. Henckel ... Dresden, Walther, 1794-5.

3 parts in two vols. 8°: RARE.

REFERENCES: LKG: VI 12a.

2167. — German, 1746.

Unterricht von der Mineralogie. Dresden, 1746.

8°: xiv 327 p. VERY SCARCE.

REFERENCES: Schröter's *Journal für die Liebhaber*: 2, 72.

2168. — German, 1745.

Medicinisher Aufstand und Schmelzbogen von der Bergsucht und Hütten-Katze, auch einigen andern, denen Bergleuten und Hütten- Arbeitern zustossenden Krankheiten, vor dieselben und diejenigen so in Stein, Erz, Metall und Feuer arbeiten, ausgestellt. Dresden, F. Hekel, 1745.

8°: [10], 208, [2] p., folding plate. VERY SCARCE.

HENKEL, Johann Friedrich.

See: **Henckel, Johann Friedrich.**

HENSLOW, John Stevens. (BORN: Rochester, Kent, England, 6 February 1796; DIED: Hitcham, Suffolk, England, 16 May 1861) *English botanist.*

Born into a large family, Henslow was educated in the country, where he developed a love for nature. He kept this interest when he entered in 1814, Cambridge University, where he studied mathematics, chemistry, and mineralogy (under Clarke). Botany was his true interest, however. He eventually became a professor of Botany at Cambridge, a position which he kept the remainder of his professional life.

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 542, 218-228. • Boase, *Modern English Biography*, 1892-1921. • *Catalogue of Portraits of Naturalists*: 568 [4 portraits listed]. • DSB: 6, 288-9 [by M.V. Mathew]. • Jenyns, Leonard. *Memoir of the Rev. John Stevens Henslow*. London, J. van Voorst, 1862. ix, 278 p., frontispiece (portrait of Henslow). [BL Shelfmark, 10825.cc.5.]. • *Proceedings of the Geological Society, London*: 1862, p. xxxv-xxxvii. • Sarjeant, *Geologists*, 1980: 1, 1240. • WBI.

2169. — English, 1823.

A | Syllabus | Of | A Course of Lectures | On | Mineralogy. | [ornate rule] | By | John Stevens Henslow, | [...3 lines of titles and memberships...] | [double rule] | Cambridge: | Printed by J. Hodson, Trinity-Street, | And Sold By J. Deighton And Sons. | [rule] | 1823.

8°: [2], [v]-xxii, [2], 1-119 p., illus. Bibliography, p. [xxiv]. PAGE SIZE: 212 x 128 mm.

VERY RARE. In 1818 Henslow was elected a fellow of the Linnean Society and in 1819 a fellow of the Geological Society of London. He prepared an extensive geological survey of the Island of Anglesea that was published as "Geological Description of Anglesea," (*Transactions of the Cambridge Philosophical Society*, 1 (1822), 359-452). This led to his election to the chair of mineralogy at Cambridge in 1822. In that capacity he gave lectures on the subject to his students, of which the present work is the accompanying text to those classes. However, Henslow was more interested in botany, and in 1825 when the position opened, he offered himself as a candidate and was elected unopposed to the chair of botany. So Henslow's *Syllabus* was in use at Cambridge for only a few years.

REFERENCES: Berry, Arthur John. "A sketch of the study of crystallography and mineralogy in Cambridge, 1808-1931," *International Union Crystallographers* (Cambridge, England 15-24 August 1960), 16 p. • BL: [no copy listed]. • Challinor, *History of British Geology*, 1971: p. ?? • NUC: 241, 278 [NH 0290515]. • Smith, *Early Mineralogy in Great Britain*, 1978: p. 64.

HENTSCHEL, Samuel. (BORN: 1653; DIED: 1681) *German professor.*

No information found.

2170. — Latin, 1658 [Dissertation].

Q.D.B.V. | Dissertationem Physicam | De | Terra Lemnia | disquisitioni publicæ | exponunt. | Præses | M. Samuel Hentschel, | Lesnensis |

& Respondens | M. Elias Cüchlerus, | Gorlicio-Lusatus. | In Auditorio Minori, | Ad Diem 15. Decembr. A. M.DC.LVIII. | [rule] | Wittebergæ, | Literis Johannis Haken.

4°: A-B⁴; 8ℓ.; [16] p. Dissertation, University of Wittenberg, 1658. Samuel Hentschel, praeses. Elias Cüchler, respondent. RARE.

REFERENCES: BL: [T.967.(2.)]. • Hoover Collection: no. 814. • *Katalog Bergakademie Freiberg*, 1879: p. 141 [VI. 439.]. • LKG: XVI 175. • VD17: 14:643534Y.

2171. — Latin, 1659 [Dissertation].

Q.D.B.V. | De | Terra Lemnia | Particulam alteram | Disquisitioni publicæ exponunt, | Præses | M. Samuel Hentschel | Lesnensis, | Et Respondens | Johannes Velthem | Hallensis Saxo. | Ad Diem 16. Novembr. A. M.DC.LIX. | [rule] | Wittebergæ, | Typis Jobi Wilhelmi Fincelii.

4°: A-B⁴; 8ℓ.; [16] p. Dissertation, University of Wittenberg, 1658. Samuel Hentschel, praeses. Johann Velthem, respondent. RARE.

REFERENCES: BL: [B.239.(14.)]. • LKG: XVI 175. • VD17: 14:643530T.

2172. — Latin, 1662 [Dissertation].

Q.D.B.V. | Disquisitionem Naturalem | De | Asteria, | Gemma, | publice proponunt | Præses | M. Samuel Hentschel, | Facultat. Philosoph. Adiunctus, | & | Respondens | Joh. Henricus Laurentius, | Freiberga Silesius. | A.O.R. MDCLXII. | die 23. August. | [rule] | Witteb. Typis Johannis Borckardi.

4°: A-B⁴ C²; 9ℓ.; [18] p. Dissertation, University of Wittenberg, 1662. Samuel Hentschel, praeses. Johann Henricus Laurentius, respondent. RARE.

REFERENCES: BL: [444.a.9.]. • *Katalog Bergakademie Freiberg*, 1879: p. 391 [VI. 442.]. • LKG: XVI 211. • VD17: 12:165047E.

HENWOOD, William Jory. (BORN: Perron Wharf, Cornwall, England, 16 January 1805; DIED: 5 August 1875) *English mining expert.*

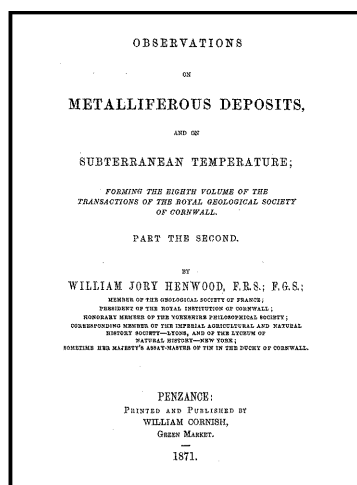
English mineralogist and mining expert. From 1832 to 1838, Henwood was the supervisor of tin production in Cornwall. He then became a consulting engineer until 1843 when he took charge of the Gongo-Soco mines in Brazil. He reported to the Indian government on the potential metal production of Kumaon and Gurhwal in 1855. In the late 1860's he retired to Cornwall and became in 1869 President of the Royal Institution of Cornwall. He was elected Fellow of both the Royal Society (1840) and the Geological Society (1828); from the later he received the Muchison Medal in 1874. A hydrous phosphate of copper and aluminum named "Henwoodite" after him by J.H. Collins in 1876.

REFERENCES: DNB. • *Encyclopaedia Britannica*, 11th edition. • *Proceedings of the Geological Society, London*: 1876, 82-5. • Sarjeant, *Geologists*, 1980: 2, 1241.

2173. — English, 1871.

Observations | On | Metalliferous Deposits, | And On | Subterranean Temperature; | Forming The Eighth Volume Of The | Transactions Of The Royal Geological Society | Of Cornwall. | Part The

HERBALS



OBSERVATIONS, 1871

Second. | By | William Jory Henwood, F.R.S.;
F.G.S.; | [...7 lines of titles and memberships...] |
Penzance: | Printed and Published by | William
Cornish, | Green Market. | [rule] | 1871.

2 parts. [Part 1] 8°: xxxi, 722 p., illus.,
tables. [Part 1] 8°: 382 p., illus., tables. Published
as: *Transactions of the Royal Geological Society of
Cornwall*, vol. 8, parts 1-2.

SCARCE. This is perhaps the first modern attempt
to correlate the entire world's metalloferous deposits
against one another in order to develop relationships
and similarities with their mineralization and internal
structure. Contained in the text are descriptions
of many of the major world-wide mineral resources
of the time, all examined by the author during his
distinguished career. The text is then divided into two
major parts. The first provides descriptions of mineral
resources in North-Western India, Kumanon, Guhwal,
Bengal, Chili, including Chañarcillo & Copiapò, Brazil,
especially Minas Geraës, North America, including
Virginia, Michigan and New Brunswick, Jamaica,
Spain, France, The Channel Islands, Ireland, and Great
Britain, especially Perthshire and Cornwall. The second
portion of the work describes the author's meticulous
records on the water temperatures of mines described
in the first part. Many folding plates and tables
at the end of the second section illustrate methods
of ore production and cross-sections of various mines
described in part one.

REFERENCES: BL: [7106.f.25.(4.)]. • *Katalog Bergakademie Freiberg*, 1879: p. 292 [VII. 1247. a. b.]. • NUC.

HEPPE, Johann Christoph. *German watchmaker & naturalist.*

Heppé followed his father trade and became a
watchmaker. He was also a private scholar who apparently
had a great interest in natural history and science.

REFERENCES: Baader, *Lexikon Baierischer Schriftsteller*,
1824-5. • DBA: I 516, 58-68. • Hamberger & Meusel,
Gelehrte Teutschland, 1796-1834. • Stresemann, E.,
"Johann Cristoph Heppé," *Verh. orn. Ges. Bayern*, 17

(1926), 105-107. [Cf. Nissen ZBI, p. 196.]. • WBI. • Will,
Nürnbergisches Gelehrten-Lexicon, 1755-1808.

2174. — German, 1776-80.

Die Drey Reiche der Natur zum Gebrauch für
Lehrer und Hofmeister bey dem Unterricht der
Jugend. Tierreichs. Erste Ausgabe. Pflanzenreichs.
Erste Ausgabe. Stein- und Mineralreichs. Erste und
Zweyte Ausgabe. [By J. C. Heppé]. Nuremberg,
Christoph Daniel Henning, 1776-80.

3 parts. [Part 1: 1776] 4°: 48 p., 10 hand-colored
plates (animal subjects). [Part 2: 1776] 4°: 56 p., 10
hand-colored plates (plant subjects). [Part 3: 1780] 4°:
62 p., 20 hand-colored plates on 17 leaves (mineral and
gem subjects). PAGE SIZE: 210 x 175 mm.

PLATES: All the plates are designed by J.C. Henning.

VERY RARE. A very rare colored illustrated work
describing the three kingdoms of nature, animals, plants
and minerals. It was directed to curious youths, and
its texts reflects this direction. Some of the zoological
plates show apes and monkeys.

REFERENCES: BL: [34.a.12.].

HERBALS.

See also: Arbolayre (or Grant Herber).

In a descriptive bibliography of mineralogy, it would seem
that the merits of the early herbals would seem limited, but
the facts are quite different. As a group, this type of book
records the late medieval view of the natural world in terms
of how nature could be used to benefit man. Relationships
and the uses of plants, animals and minerals discussed
in these texts offers insight into the early development of
medicine, agriculture and pharmaceutical therapies for the
common person. In short, the herbals retain their relevancy
to early mineral studies.

The early printed herbals are among the most
remarkable of the stream of books printed in the incunabula
period because they are milestones in the history of printing
and scientific illustration. Although the name implies a
strictly botanical treatise, this class of book refers to a
practical medical text intended for both physicians and the
common folk. It appeared in reaction against the expensive
apothecary, calling attention to a wide range of easily
available natural remedies derived from plants, animals and
minerals. In their time, these volumes were a very popular
technical literature, and regularly relied upon by their
readers to provide cures for various ailments. However,
because of this career, many copies of these volumes were
destroyed, and the long history of the survivors is reflected
in their usually sad condition.

The beauty, rarity and inaccessibility of the herbals
has both spurred and stymied bibliographical research,
and caused much in the way of publication. As a result
errors in the literature have been introduced or permitted
to stand. Besides elucidating the mineralogical content
of these books, the purpose of this study is to hopefully
unravel the bibliographical knot of the herbals.

Most of the information related to the herbals has
occurred due to bibliographical scholarship in botany.
However, a perplexing problem in this field is the confusion
over the various titles by which the early herbals are
known. For the current study, the system proposed by
Arnold Klebs in his description of the Becher collection
is used. Klebs assigns priority to the 1484 printing by
Schoeffer of the *Herbarius*, which contains 150 illustrated
chapters. All subsequent appearances of this work will
incorporate as a compiler's comment the word HERBARIUS
at the beginning of the title. Schoeffer's second herbal

comprising 435 chapters, was published at Mainz in 1485 and was termed *Der Gart* by Klebs but in this study is referred to as *GART*. This designation will appear at the beginning of each appropriate title. The final member of the herbal triad consists of 1,066 chapters and is referred to by the descriptor *HORTUS*. In the past, these three distinct families have been bibliographically confused, with some researchers stating that they are translations of each other, which is not possible. By relying on the number of chapters within the text, 150, 435 and 1,066 respectively, it is possible to untangle the bibliographies of the *Herbarius*, *Gart* and *Hortus*.

REFERENCES: Arber, *Herbals, their Origin and Evolution*, 1986. • Bessler, *Das deutsche Hortus-Manuskript des Henricus Breyell*, 1952. • Dann, G.E., "Kräuterbuch von der Antike bis zum Ende des Mittelalters. Eine Übersicht," *Math. med. Normark*, 26 (1974), 375-91, illus. • Gaebler, *2000 Jahre Kräuterbücher*, 1964. • Gilson, *Herbals in the Fry Collection*, 1973. • Heilmann, *Kräuterbücher*, 1966. • Schmid, *Ueber alter Kräuterbücher*, 1939. • Singer, C., "The Herbal in Antiquity and its Transition to Later Ages," *Journal of Hellenic Studies*, 47 (1927), 1-25. • Stannard, *Medieval Herbals and their Development*, 1974. • Stannard, *The Herbal as a Medical Document*, 1969.



HERBARIUS, 1484

Herbarius Latinus

2175. — Latin, 1484 [First edition].

[HERBARIUS] [In black:] Herbarius. Ma= | guntie impressus. | Anno m̄c̄. lxxxiiiij. | [in red, printer's mark].

4°: [14 2-21⁸ 22¹⁰] (unsigned; 19/8 blank); 174ℓ.; no pagination, foliation or signature marks. 150 woodcuts of plants in the text numbered i-cl. Capital spaces. PAGE SIZE: 210 x 145 mm.

CONTENTS: 1/1r (=1r), Title.; 1/1v (=1v), Blank.; 1/2r-1/2v (=2r-2v), Preface, beginning: "[R6]Ogatu plurimoꝝ inopu nūmoꝝ | egentiū appotecas refutātiū oc= | cationi illa ꝓ necessaria ibidē ad | corp⁹ egrū spectātia sūt cara sim | plicia et composita. nūmisꝓ pluri | mis ꝓparāda ..."; 1/3r-1/4v (=3r-4v), Index, "Capitula herbarū scō'm | ordinem alphabeti."; 2/1r-19/6v (=5r-154v), Text describing 150 herbs arranged alphabetically in 150 chapters on 150 leaves.; 19/7r-22/10r (=155r-174r), Text of remaining six parts of the book.; 22/10v (=174v), line 22, END: "... Valet etiā ut inde fiant | suppositoria desup spergantur pulueres de esula | et puocabūt asellationem."

EDITIO PRINCEPS. Very rare. This is the first herbal printed in Germany, from the shop of Peter

Schoeffer [see note below], one of the first printers, which issued from his press at Mainz in 1484. Herbals were so called because they described medical remedies derived chiefly, but not solely, from herbs and plants, which were then the major source of medicines. As is shown by its rapid transmission through original and pirated editions, Schoeffer's *Herbarius* rapidly became one of the most popular and useful handbooks for the general public and medical communities. The woodcut illustrations of plants helped to sustain its popularity, and these pictures were copied and recopied in subsequent editions.

The *Herbarius* shows every sign of being a compilation rather than an original work, for it quotes material drawn from classical, Arabic, and medieval sources, none of which appeared later than a century before the *Herbarius* was printed. No manuscript of it has been discovered as yet, and the original source of its illustrations remains unidentified. However, the plant species described are all found in central-northern Europe, which perhaps points to a Germanic source of the text. Schoeffer probably discovered an older manuscript which he committed to the press.

The text of the book is divided into seven parts: (1) De virtutibus herbarum, which is the major portion describes 150 German herbs and plants in brief chapters, each illustrated by a woodcut, (2) De simplicibus laxativis et lenitivis, provides information on 12 simple laxatives, (3) De simplicibus comfortativis, describes in 16 chapters various spices, (4) De fructibus et seminibus et radicibus, 22 chapters on fruits and nuts (5) De gummis et eis similibus, 10 chapters on gums, (6) De generibus salis et mineris et lapidibus, 16 chapters on minerals, stones and salts, including alum, silver, coral, lapis lazuli, sulphur, tartar, and (7) De animalibus et provenientibus ab eis, in 20 chapters describes pharmacological products derived from various animals.

The first edition of the *Herbarius* exists in several variations, none of which constitutes a separate edition, but rather each reflects a condition that occurred during the printing of the book. For convenience they are listed as A1, A2, A3, B1, B2, and B3. A1 has the title on its first leaf, printed in red or black, and also bears the date of 1484 and Schoeffer's device. A2 transposes the woodcuts for chapters 42 and 48 (*Cuscuta* and *Cannabis*), and misnumbers chapter 75 as 73. A3 corrects the misnumbering but allows the exchanged illustrations to remain uncorrected. B1 has its first leaf blank (i.e., no title page), B2 places the woodcuts for chapters 42 and 48 in their proper positions, but misnumbers 75 as 73, and B3 corrects the misnumbering, but retains the transposed illustrations in chapters 42 and 48.

Johann von Cube. (BORN: ; DIED: Franckfurt am Main, Germany, Between 23 September and 5 March 1503/4) *German physician*. Cube (also known as, Johann Dronnecke (or Wonnecke) von Caub or Cuba) lived at the end of the 15th century in Augsburg. He was physician to Adolf III of Nassau and Adalberts of Saxony. In 1484, he relocated to Frankfurt am Main where he was appointed the

HERBALS: HERBARIUS LATINUS

city physician. For centuries, he was considered the author behind the *Herbarius* (1484), but more recent research shows that he was at most an editor.

Peter Schoeffer. (BORN: ; DIED:) *German printer.* Schoeffer started as a calligrapher in Paris before coming to Mainz where he served as foreman in Gutenberg's shop. After Johann Fust repossessed Gutenberg's equipment in 1455/56 he employed Schoeffer to do the printing as well as produce type for it. Later, Schoeffer married Fust's daughter and ultimately inherited the business.

REFERENCES: (A1 Variant) Brunet: 3, 106. • Choulant, *Graphische Incunabeln*, 1858: p. 13, no. 1. • *Cleveland Herbal & Botanical Collections*, 1992: no. 6. • Fairfax Murray (German): 1, 327-8, no. 190. • Goff: no. H-62. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8444. • IGI: no. 4671. • Klebs, *Incunabula Scientifica*, 1938: no. 506.1. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 89, no. a. • Klebs, *Catalogue of Early Herbals*, 1925: no. 1. • Nissen (BBI): no. 2299. • NUC: 241, 470-1 [NH 0295031]. • Oates, *Cambridge 15th Century Books*, 1954: no. 35. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 72-8. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1311. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10753. • Proctor, *Index*, 1898-1906: no. 121. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 14, p. 9. • Schreiber, *Kräuterbücher*, 1924: p. iv-vi. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 83a. • (A2 Variant) Goff: H-62. • Klebs, *Incunabula Scientifica*, 1938: no. H-62. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4203. • (A3 Variant) Goff: no. H-62. • Klebs, *Catalogue of Early Herbals*, 1925: no. 2. • (B1 Variant) BMC XV: 1, 39 [IA 288-89]. • Goff: no. H-62. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 84437. • IGI: no. 4675. • Polain, *Catalogue*, 1932: no. 1878. • Proctor, *Index*, 1898-1906: no. 142. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 83a. • (B2 Variant) Goff: no. H-62. • Klebs, *Catalogue of Early Herbals*, 1925: no. 3. • Klebs, *Catalogue of Early Herbals*, 1925: no. 2. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4204. • (B3 Variant) Goff: no. H-62. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4205. (Cube) ADB: 4, 637. • Archiv für Frankfurts Geschichte und Kunst: 7, 110ff. • Archiv für Geschichte des Buchwesens: Jg. 58, 1129-36. • DBE: 2, 408 [see, Cuba, Johannes von]. • Hirsch, *Biographisches Lexikon*, 1884-8: 2, 151 [by W. Stricker]. • Nissen, *Herbals of Five Centuries*, 1958: 56. • Pritzel, G.A., "Johannes von Cube," *Botanische Zeitung*, 4 (1846), 785-90. • Stammler, *Deutsche Literatur des Mittelalters*, 1933-55: 4, col. 1093 [by K. Sudhoff]. • Stricker, W., "Ueber Johann von Cube, Stadtarzt zu Frankfurt am Main und Verfasser des 'Ortus Sanitatis' zum Theil nach den Aufzeichnungen von Georg Kloss," *Henschel's Janus*, 1 (1846), 779-86. [Reprinted: Leipzig, Alfred Lorentz, 1931]. (Schoeffer) BMC XV. • Geldner, *Die deutschen Inkunabeldrucker*, 1968-70. • Heilmann, *Kräuterbücher*, 1966: 387-7, portrait. • *Lexikon des Buchwesens*. • Ruppel, A., *Peter Schoeffer aus Gernsheim*, Mainz/Berlin: Gutenberg-Gesellschaft, 1937, 62, [2] p., frontispiece, 9 facsimiles. • Wehmer, *Deutsche Buchdrucker*, 1971.

2176. — Latin, 1484.

[HERBARIUS] Herbarius (with German synonyms) ... Speyer, Johann and Conrad Hist, 1484.

4^o: [1⁴ 2-22⁸] (unsigned; 22/8 blank); 172ℓ.; no pagination, foliation or signiation marks.

CONTENTS: 1/1r, Title (=1r), "Herbarius."; 1/1v (=1v), Blank.; 1/2r-1/2v, "[R]Ogatu plurimorum inopinum | ..."; 1/3r-1/4r (=3r-4r), "Capitula herbarum secundum | ordinem alphabeti, ..."; 1/4v (=4v), Blank.; 2/1r-19/6v (=5r-154v), Text of herbs with the woodcuts; 19/7r-19/7v (=155r-155v), "Particula secunda de | simplicibus laxaliuis | liniliuis seu lubrica- | liuis superioribus anti | dolis deseruientibus | ..."; 19/8 (=156), Blank.; 20/1r-22/7v (=157r-171v), "Capitulum Primum |

[] Loepaticum calidum est et siccum in se- | ..."

EXTREMELY RARE. A short time after Schoeffer's *Herbarius* appeared in 1484, the printers Johann and Conrad Hist [see notes below] issued a pirated edition of the book from their press at Speya. While the arrangement of the material and the text is identical to Schoeffer's work, the woodcut illustrations for the most part are reverse the direction of the original work—a necessecary consequence of tracing the unreversed originals into the cutter's block. The woodcuts in this Hist edition of the *Herbarius* also show a bit more artistic flare in their execution.

Of the many editions of the *Herbarius* the one printed by the Hist brothers is probably the rarest, and it is among the rarest of all printed herbals. In late 1484, a short while after it was printed, the printing activities of the Hist brothers were interrupted, and they made no further use of the *Herbarius* type until 1489. Consequently, eventhough this edition bears no printed date, its year is firmly fixed at 1484, but after the publication of Schoeffer's edition.

Conrad Hist. (BORN: ; DIED: 1531) *German printer.* and **Johann Hist** (BORN: ; DIED: before 1492), brothers and German printers.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 14, no. 2. • Goff: H-63. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8448*. • Klebs, *Incunabula Scientifica*, 1938: no. 506.2. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 86, no. a. • Klebs, *Catalogue of Early Herbals*, 1925: no. 4. • NUC: 241, 470-1 [NH 0295033]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 86, no. a. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 16, p. 16. • Schreiber, *Kräuterbücher*, 1924: p. viii-ix. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4210. (Hist) ADB. • DBA: I 544, 203; II 591, 215. • NDB. • WBI.

2177. — Latin, 1485.

[HERBARIUS] Herbarius Patauia im: | pressus Anno domī ⁊ cete | ra. lxxxv.

4^o: [1⁴ 2-21⁸ 22¹⁰] (unsigned).; 174ℓ.; no pagination, foliation or signiation marks. Gothic letter, 33-34 lines, with 150 woodcuts of plants in the text numbered i-cl. Leaf 156 blank. PAGE SIZE: 209 x 150 mm.

CONTENTS: 1/1r (=1r), Title.; 1/1v (=1v), Woodcut?.; 1/2r (=2r), "[R]Ogatu plurimoz | iopū nūmoz egētū ... [line 20] ... Cum ergo corpus egrum actum cu= | ratium requirat seu practicū. Ob id psens opuscu= | lum suā sumpsit denomiātōnem. Aggregator pēti= | cus de simplicibus. In quo quiuis hoīm sibiipi sub= | uenire poterit paus deductis expēsis aduersus quā | libet egritudinē corpus humanum a vertice capitis | ad plantas pedum ab intra corpus focasqz affligen | tem ..."; 1/3r (=3r), "Capitula herbaꝝ secundū | ordinē alphabeti."; 20/8r (=155r), "Particula secunda De | simplicibus laxatiuis li= | nitiuis. seu lubricatiuis su | perioribus antiquis de= | seruientibus."; 22/10v (=174v), END: "de esula ⁊ puocabunt assellātōnem."

VERY RARE. Pirated reprint of Schoeffer's *Herbarius Latinus* by Johann Petri [see note below] differing primarily in some of the German synonyms due to local differences in dialect and to the fact the many illustrations are mirror images of the originals. This is the first dated work from Petri's press and the first of several editions of the herbal to issue from his

press.

The woodcut illustrations are generally the same as those in the Mainz edition, but they are slightly different and usually reversed. Two plants (nos. 28 and 30) have different numbers than those in either the Mainz 1484 or the Passau 1486 editions. In some copies of this edition woodcut numbers 96 and 148 are printed upside down.

Johann Petri. (BORN: 1441; DIED: 1512) *German printer.* The earliest work bearing a date with which Petri has been connected is the *Herbarius* of 1485, the latest a *Calendar* for 1493.

REFERENCES: BMC XV: 2, 616 [IA 11324; imperfect copy]. • Brunet: 3, 106. • Choulant, *Graphische Incunabeln*, 1858: p. 15, no. 6. • Cleveland *Herbal & Botanical Collections*, 1992: no. 9. • Goff: no. H-64. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8445*. • IGI: no. 4672. • Klebs, *Incunabula Scientifica*, 1938: no. 506.6. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 90, no. c. • Klebs, *Catalogue of Early Herbals*, 1925: no. 7. • Nissen (BBI): no. 2300. • NUC: 241, 470-1 [NH 0295034]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1312 [Arnaldus]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10754. • Proctor, *Index*, 1898-1906: no. 2829. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 16, 17. • Schreiber, *Kräuterbücher*, 1924: p. vi-vii. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4206. • Schullian & Sommer, *Catalogue of Incunabula*, 1948: no. 236. • Wellcome Catalog (Books): 1, no. 3098. (Petri) BMC XV. • DBA: I 946, 63. • Maschek, ??., "Johann Petri der erste Buchdrucker in Wien," *Zentralblatt für Bibliothekswesen*, Jahrg. 59 (1942), Heft 1/2, 38-45. • WBI.



HERBARIUS LATINUS, c1485 (VELDENER)

2178. — Latin, c1485.

[HERBARIUS] [Within a woodcut frame that also contains the printer's device:] *Herbarius i latino cū figuris.*

4°: [1⁴ 2-21⁸ 22-24⁶] (unsigned); 174ℓ. Gothic letter, 28-30 lines, with 150 numbered (i-Cl) woodcuts of plants. Capital spaces. PAGE SIZE: 202 x 135 mm.

CONTENTS: 1/1r, Title.; 1/1v, Woodcut?; 1/2r (=2r), "[R]ogatu plurimorū iopū nūmorū egētiū ap | potecas refutāciū occasione illa quia necessa | ria ibidē ad corpus egrū spectācia sūt cara sī | plicia ... [line 17] ... Cū ergo corp⁹ egrū ac | tum curatiū requirat seu practicū Ob id presēs opu | sculū suā sūpsit denominatōem Aggregator practic⁹ | de simplicibus In quo quiuis hominū sibi ipsi sub- | uenire poterit paucis deductis expensis aduersus q̄li | bet egritudinē corpus hūanū a vertice capitis ad plā | tas pedū ab intra corpus focasq̄ affligētē ..."; 1/3r (=3r), "Capitula herba | rū secūdū ordinē | alphabeti | ..."; 2/1r (=5r), Woodcut, (to left) "Absinthiū" (to right) "Alsem | absintheū est calidū ..."; 20/8r (=155r), "Particula secūda de sim. | plicibus laxatiuis linitis. | seu lubricatiuis superio- | rib⁹ antidotis deseruiēti- | bus. | ..."; 24/6r (=174r), line 25, END: "... de esula ⁊ pro | uocabunt assellationem."

VERY RARE. Veldener's Latin edition of the *Herbarius*. Earlier bibliographies considered this edition to have been published before Schoeffer's herbal. However, Veldener printed this edition after having issued at Kuilenburg a Dutch translation dated 1484. He returned later that year to Louvain and issued this Latin edition for the academic market of the town. Therefore, it is probably later than Schoeffer's edition.

Klebs/Becher: "The figures, except one, are all the same as in the Mainz edition, but generally reversed; plant 2 (*Abrotanum*) is from a different drawing. Generally, Veldener's woodcuts have a little more work in the way of crossed lines." The text is identical with Schoeffer's edition except that the German names of plants have been replaced with Netherlandish names.

REFERENCES: BMC XV: 9, 163 [IA 49335]. • Campbell, *Annales de la Typographie*, 1874-90: no. 916 [Culemborg]. • Choulant, *Graphische Incunabeln*, 1858: p. 15, no. 4 [Kuilenburg]. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: 2916. • Goff: H-59. • Klebs, *Incunabula Scientifica*, 1938: no. 506.4. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 87, no. c. • Klebs, *Catalogue of Early Herbals*, 1925: no. 5. • NUC: 241, 470-1 [NH029029]. • Oates, *Cambridge 15th Century Books*, 1954: no. 3806. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1309 [Kuilenburg]. • Polain, *Catalogue*, 1932: no. 1876. • Proctor, *Index*, 1898-1906: no. 9299. • Schreiber, *Kräuterbücher*, 1924: p. iv & lviii [Kuilenburg].

2179. Variant edition, c1485: [HERBARIUS] *Herbarius Latinus* (with Dutch synonyms) ... [Louvain:] Jan Veldener [c1485].

4°: [1⁴ 2-21⁸ 22⁶] b-c⁶ (unsigned except for the last two quires that are marked on the first leaf only); 174ℓ. Gothic letter, 28-30 lines, with 150 numbered (i-Cl) woodcuts of plants. Capital spaces. Two columns in the tables. PAGE SIZE: 204 x 141 mm.

CONTENTS: 1/1 (=1), Blank.; 1/2r (=2r), "[r]ogatu plurimorū iopū nūmorū egē | tiū appotecas refutātiū occasione illa | q2 necessaria ibidē ad corp⁹ egrū spec- | tātia sūt cara simplicia ... [line 17] ... Cū ergo corpus egrū actū cuā | tiū requirat seu practicū. Ob id presens opusculum | suā sūpsit denominacōnē. Aggreator practicū de sī | plicibus. In quo quiuis hominū sibi ipsi subuenire | potēt paucis deductis expensis. aduersus q̄libet egrī | tudinem corpus humanū a vertice capitis ad plātas | pedū

HERBALS: HERBARIUS LATINUS

ab intra corpus focasq; affligentē ...”; 1/3r (=3r), “Capitula herbarū secūdū or | dinem alphabeti. | ...”; 2/1r, Woodcut (to left) “Absintheū” (to right) “Alsem | Absintheū est calidū ...”; 20/8r (=155r), “Particula secūda: de sim | plicibus laxatiuis linitus | seu lubricatiuis superiori- | bus antidotis deseruiēti- | bus. | ...”; c/6v (=174v), line 23, END: “... de esula | et prouocabunt assellationem.”

EXTREMELY RARE. Second edition of Veldener's Latin herbal. Printed with the same woodblocks and types as the first edition, with only slight differences. Plant 66 is called Flemish Hanencam in this edition and Scarlaech in the first.

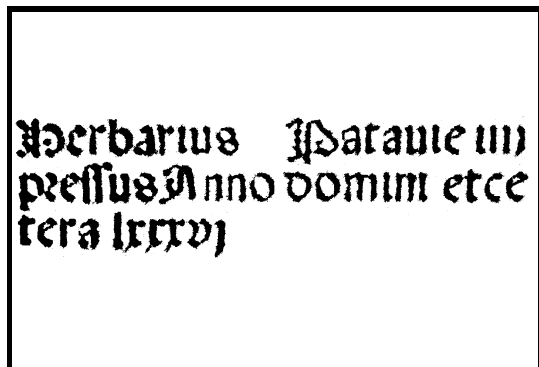
REFERENCES: BMC XV: 9, 163 [IA 49332]. • Campbell, *Annales de la Typographie*, 1874-90: no. 917. • Choulant, *Graphische Incunabeln*, 1858: p. 14-5, no. 3. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 2915. • Goff: H-60. • Klebs, *Incunabula Scientifica*, 1938: no. 506.5. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 87, no. d. • Klebs, *Catalogue of Early Herbals*, 1925: no. 6. • NUC: 241, 470-1 [NH 0295036]. • Oates, *Cambridge 15th Century Books*, 1954: no. 3804. • Polain, *Catalogue*, 1932: no. 1877. • Proctor, *Index*, 1898-1906: no. 9298.

2180. — Latin, c1486.

[HERBARIUS] Herbarius Latinus (with French synonyms) ... [Paris, Jean Bonhomme, ca. 1486].

4°: 174ℓ. VERY RARE.

REFERENCES: BMC XV: 8, 13 [IA 39859]. • Goff: H-61. • Klebs, *Incunabula Scientifica*, 1938: no. 506.9. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 88, no. e. • NUC: 241, 470-1 [NH 0295037]. • Proctor, *Index*, 1898-1906: no. 8050.



HERBARIUS PATAUE, 1486 (PASSAU)

2181. — Latin, 1486.

[HERBARIUS] Herbarius Pataue im | pressus Anno domini et ce | tera lxxxvj.

4°: 174 leaves (156 blank). Gothic letter, 33-34 lines, 150 woodcuts of plants.

VERY RARE. Second edition of the Passau Herbarius printed by Johann Petri. The woodcuts are the same as those in the first edition.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 15-6, no. 7. • Goff: H-65. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8446*. • IGI: no. 4673. • Klebs, *Incunabula Scientifica*, 1938: no. 506.7. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 90, no. d. • Klebs, *Catalogue of Early Herbals*, 1925: no. 8. • Martin Bresaluer, *Bookseller: cat.* 91 (1959), no. 41. • NUC: 241, 470-1 [NH 0295038]. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1313.

• Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10754. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 16, 17. • Schreiber, *Kräuterbücher*, 1924: p. vii. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, 4209.

2182. — Latin, 1486/7.

[HERBARIUS] Herbarius Latinus (with German synonyms) ... Passau, [Johann Petri], 1486.

4°: [14 2-21⁸ 22¹⁰] (unsigned; 1/1 and 21/2 blank); 174ℓ. Black letter, 32-33 lines, 150 woodcuts of plants numbered i-cl. PAGE SIZE: 208 x 152 mm.

CONTENTS: 1/2r (=2r), “[R6]Ogatu plurimoꝝ | inopum nūmoꝝ egentium ... (line 20) ... Cum ergo corpus | egrum actū curatiū requirat seu practicū. Ob id | presens opusculū suam sumpsit denomiātōnem. Ag | gregator practicus de simplicibus. In quo quiuis | hominū sibiipsi subuenire poterit paucis deductis | expēsis aduersus quālibet egritudiēm corp³ huma | nū a vertice capitis ad plantas pedū ab intra cor= | pus focasq; affligentē ...”; 1/3r (=3r), “Capitula herbarum secun | dum ordinem alphabeti.”; (=155r), “Particula secunda De | simplicibus laxatiuis li= | nituius seu lubricatiuis | superioribꝫantiquis de= | seruiētibus.”; (=174v), END: “... de esula et prouocabunt assellatōnem.”

VERY RARE. Third and last Passau edition, with “most of the extant copies imperfect” (Klebs/Becher). The woodcuts are the same as those in the other two editions, but they and the type is becoming noticeably worn.

REFERENCES: BL. • BMC XV: 2, 616 [IA 11326]. • Choulant, *Graphische Incunabeln*, 1858: p. 16, no. 8. • Cleveland *Herbal & Botanical Collections*, 1992: no. 12. • Goff: H-66. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8447* [Imperfect copy]. • Klebs, *Incunabula Scientifica*, 1938: no. 506.8. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 87, no. b. • Klebs, *Catalogue of Early Herbals*, 1925: no. 9. • Nissen (BBI): no. 2312. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1310 [press of J. Alacraw and Sigismundus Mair]. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 16, 17. • Schreiber, *Kräuterbücher*, 1924: vii. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, 4211.

2183. — Latin, 1491 [27 October].

[HERBARIUS] [Within an elaborate woodcut border surmounted by a scene showing two figures in discussion:] Arnoldi De Nova Villa [3 vertical dots] Avicenna. | ¶ Incipit Tratatús de uirtutibus herbarum. | [R5]ogatv Plvrimorvm Inopvm | [...15 lines of text...].

4°: [-]4 a-x⁸ (\$4 signed; c3 as c2, o3 as p3; x8 blank); 172ℓ.; no pagination or foliation. 150 text woodcuts of plants (numbered I-CL). Colophon (t6v): “¶ Finiunt Liber uocatur herbolariū de uirtutibus her- | barum. Impressum Vincentiæ per Magistrum Leonar | dum de Basilea & Guilielmum de Papia Socios. Anno sa- | lutis. M. cccc. lxxxxxi. die. xxvii. meñ. Octob. | Deo. Gratias” (=27 October 1491). Some variant copies have the incorrect reading, “Ncipit” on [-]2r. PAGE SIZE: 197 x 141 mm.

CONTENTS: [-]1 (=1), Blank.; [-]2r-[-]4v (=2r-4v), Woodcut title, followed by the Incipit and Prologus.; a1r-t6v (=5r-154v), Text of herbal.; t6v (=154v), Colophon.; u1r-x7v (=155r-171v), “Particula secunda ...”; x8 (=172), Blank.

VERY SCARCE. This is the first edition of the



INCIPIT TRATATUS DE VIRTUTIBUS HERBARUM, 1491

Herbarius to be printed in Italy, which is why the German synonyms have been omitted. It was printed by Leonardus Achates and Guilielmus de Papia [see notes below]. The woodcuts of the plants have been influenced by the design of the German cuts, but in this edition they are newly executed with somewhat finer detail. The text and arrangement are identical to Schoeffer's edition, but without the German synonyms.

Although new to this work, the title woodcut of two figures was used the year before in an edition of Piero Crescenzio's *Opus Raralium Commodorum* to represent Crescenzio preparing the book for his patron Charles of Anjou. In the present work, the cut is used to represent Arnoldus de Villa Nova discussing botany with Avicenna. The omission of the woodcut figures in subsequent editions where the names of Arnoldus and Avicenna were retained in type in their present location led to false idea of authorship of this work by Arnoldus.

The numbers to the woodcuts 113 and 119 are exchanged by misprint.

Leonardus Achates. (BORN: ; DIED: 1491) *Italian printer*. Achates was the first printer in Vicenza.

Guilielmus De Papia. (BORN: ; DIED:) *Italian printer*.

REFERENCES: Anderson, *Illustrated History of the Herbals*, 1997: 85. • BMC XV: 7, 1033 [IA 31731]. • Choulant, *Graphische Incunabeln*, 1858: 16, no. 9. • Cleveland *Herbal & Botanical Collections*, 1992: no. 15. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: no. 649a. • Goff: H-68. • Hain, *Repertorium Bibliographicum*, 1826-38: no. HC 8451. • IGI: no. 4676. • Klebs, *Incunabula Scientifica*, 1938: no. 506.10. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 91, no. f. • Klebs, *Catalogue of Early*

Herbals, 1925: no. 10. • Nissen (BBI): no. 2307. • NUC: 241, 470-1 [NH 0295042]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 86/87 & 91, no. f. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1314. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10755. • Proctor, *Index*, 1898-1906: no. 7131. • Sander, *Livre à Figures Italien*, 1941: no. 610. • Wellcome Catalog (Books): 1, 3100. (Achates) ADB. • DBA: I 3, 214; II 5, 93-95. • NDB. • WBI. (De Papia)

2184. — Latin, 1499 [14 December].

[HERBARIUS] Incipit Tractatus de | virtutibus herbarum.

4°: A⁴ a-x⁸ (\$4 signed; x8 blank); 172ℓ.; no pagination or foliation. Roman letter, 27, 28 & 37 lines, with 150 woodcuts of plants. COLOPHON (x7v): ¶ Impressum Venetiis per Simonem Pa | piensem dictum Biuilaquam Anno Do | mini Iesu Christi. 1499. die. xiiii. Decēbris.

CONTENTS: A1r, Title.; A1v, Blank.; A2r, No woodcut so text starts, "Arnoldi de nova villa Avicenna | Rogatu plurimorum ..."; a1r-s8v (=5r-154v), Text of herbs.; t1r-x7v (155r-171v), Text of other parts.; x7v, Colophon.

RARE. Second edition of the *Herbarius* printed in Italy by Simon Bevilaqua, reprinted from the 1491 edition of Achates. The woodcuts of the plants are from the same blocks. The title woodcut representing Arnoldus de Nova Villa and Avicenna is omitted, but the names are retained (see preceding entry). The woodcuts numbered 113 and 119 are exchanged as in the 1491 edition. The woodcut of Mandragora is printed upside down and misnumbered XCVIII instead of XCIII.

REFERENCES: BMC XV: 5, 524 [IA 23999]. • Choulant, *Graphische Incunabeln*, 1858: p. 16, no. 10. • Cleveland *Herbal & Botanical Collections*, 1992: no. 21. • Essling, *Livres à Figures Vénitiens*, 1907-14: 2, 1190. • Goff: H-69. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 1807 [Arnoldus]. • IGI: no. 4677. • Klebs, *Incunabula Scientifica*, 1938: no. 506.11. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 92, no. h. • Klebs, *Catalogue of Early Herbals*, 1925: no. 11. • Nissen (BBI): no. 2308. • NUC: 241, 470-1 [NH 0295043]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 87. • Pellechet, *Catalogue General des Incunables*, 1970: no. 1315 [variant?]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10757. • Proctor, *Index*, 1898-1906: no. 5415. • Sander, *Livre à Figures Italien*, 1941: no. 612. • Schullian & Sommer, *Catalogue of Incunabula*, 1948: no. 237. • Wellcome Catalog (Books): 1, 3101.

2185. — Latin, 1502.

[HERBARIUS] Incipit tractatus de virtutibus herbarum. | Arnoldi de noua villa Auicenna. Imbressum Venetiis per christophorum de pensis anno domini nostri Jesu Christi 1502, Julius, die vero 4.

4°: 172 leaves, with 150 numbered woodcuts of plants, Luc. Ant. Giunta's printer's device printed in red on the title page. Woodcut capitals.

RARE. Second edition issued at Venice, the third printed in Italy Christophorus de Pensis for Luc. Ant. Giunta. Based upon the title page's device, this edition was printed for Luc. Ant. Giunta. Woodcuts are from the same blocks as used in the 1491 and 1499 editions. The woodcut of Mandragora by misprint numberd XCVIII instead of XCIII as in the 1499

HERBALS: HERBARIUS LATINUS

edition. Woodcut XXIII is printed upside down.

Not noticed by Renouard in his list of Giunta's editions (Paris, 1834).

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 16-7, no. 11 [not seen]. • Essling, *Livres à Figures Vénitiens*, 1907-14: 2, no. 1191 [wrong collation]. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 14, no. f [describes an imperfect copy]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 12. • NUC: 241, 470-1 [NH 0295046]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10756. • Reichling, *Appendices ad Hainii-Copingeri*, 1905-14: no. 404 [followed by Klebs in his description].

2186. — Latin, 1509.

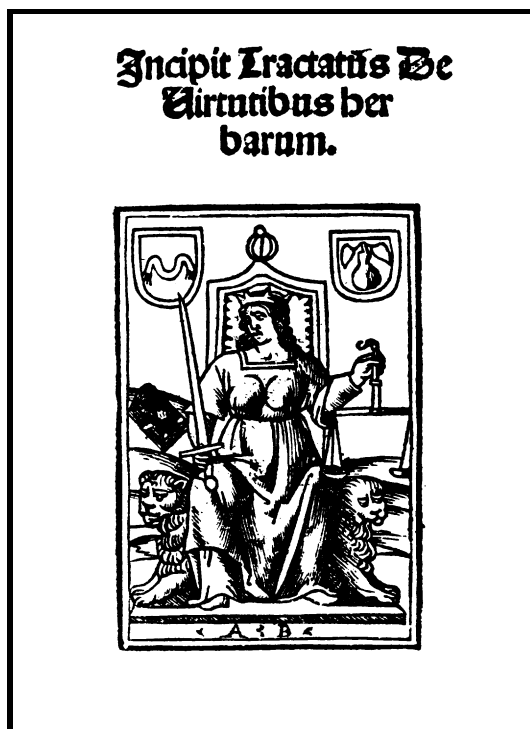
[HERBARIUS] Incipit Tractatus De | Uirtutibus her
| barum.

4°: A⁴ a-x⁸ (\$4 signed; x8 blank); 172ℓ.; no pagination or foliation. With 150 woodcuts in the text numbered I-CL. Woodcut capitals. COLOPHON (x7v): **¶** Impressum Venetiis per Ioannem rubeum & | Bernardinū fratres Vercellenses. Anno | domini. M. D. VIII. die. xv. marci. PAGE SIZE: 210 x 150 mm.

RARE. This is the third edition of the 'Herbarius Latinus' printed by Johannes and Bernarinus Rubeus in Venice, and the fourth printed in Italy. With two exceptions, these are the blocks cut for the 1491 Vicenza edition, which were transferred to Venice and used by Simone Bevilacqua for his 1499 edition; two of the blocks are copies of the originals, with one reversed. The blocks were used again for the 1502 Giunta edition, which the above is a page-for-page reprint of. The preface attributes the work to Arnoldus de Villanova, as does the 1502 edition, which was copying an error in the text of the 1499.

Despite the fact that the 'Herbarius' originated in Germany, it 'sold as well in Italy, as it did in Germany, if not better. There its second section may have contributed to its success, for it was concerned with materials of medicine that were commonly available in the shops of apothecaries and spice merchants... The second section has 96 chapters, though many of them are very brief. They deal with the following: laxatives; aromatics, fruits, seed, and plants of garden and orchard; gums and resins; salts; minerals and stones; and a variety of animals and their products, such as goose-grease, cheese, honey, and ivory" (Anderson, *An illustrated history of the herbals* p. 86). The Italian woodcuts are based on the German 'Herbarius' cuts 'but all are newly designed, being finer in execution and the lines more delicate, and for the greater part quite different' (Klebs). Nissen considered them more delicate and Arber 'more ambitious... and, on the whole... more naturalistic' (Herbals p. 192).

REFERENCES: Adams, *Cambridge Books*, 1967: H-298. • Choulant, *Graphische Incunabeln*, 1858: p. 17, no. 12. • Cleveland Herbal & Botanical Collections, 1992: no. 25. • Essling, *Livres à Figures Vénitiens*, 1907-14: 2, 1192. • Klebs, *Catalogue of Early Herbals*, 1925: no. 13. • Nissen (BBI): no. 2310. • NLM 16th Century Books (Durling): no. 2268. • NUC: 241, 470-1 [NH 0295048]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10758. • Wellcome Catalog (Books): 1, 3103.



incipit tractatus, 1520

2187. — Latin, 1520.

[HERBARIUS] Incipit Tractatus De | Virtutibus her
| barum. | [Printer's woodcut device].

4°: A⁴ a-x⁸ (A2 missigned A; x8 blank); 172ℓ.; [8] p., I-CLℓ., [34] p. Printer's device (Justice) on the title and 150 woodcuts of plants in the text. COLOPHON (x7v): **¶** Impressum Venetiis per Alexandrum de Bindonis. | Anno Domini. M.D.XX. die .4. Aprilis.

VERY SCARCE. Printed by Alexander de Bindonis, this is the fifth Venice edition (sixth printed in Italy) and the last edition of the Latin Herbarius. The woodcuts are the same as the 1509 edition. Three woodcuts bear the wrong numbers: CLVII instead of CXLVIII, CXXIII for CXXX, and LI for LII. Otherwise, it appears to be a page for page reprint of the 1509 Venice edition.

REFERENCES: Essling, *Livres à Figures Vénitiens*, 1907-14: 2, no. 1193. • Hunt Botanical Catalog: no. 19. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 88, no. g [imperfect copy]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 14. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 194. • Mortimer *Italian Books*: no. 228. • Nissen (BBI): no. 2311. • NUC: 241, 470-1 [NH 0295049].

Dutch editions

2188. Dutch transl., 1484: [HERBARIUS] Kruydboek [in Dutch, with Latin synonyms in the text] ... [Louvain:] Jan Veldener, 1484.

4°: [1-21⁸ 22⁴ 23-26⁸ 27⁴] (unsigned); 208ℓ.; no pagination, foliation or signature marks. Capital spaces. 150 woodcuts of plants in the text numbered i-cl. Signatures in manuscript are recorded in the British Library copy as follows: *⁸ a-u⁸ x⁴ A-D⁸ E⁴. PAGE SIZE:

185 x 120 mm.

CONTENTS: 1/1r (=1r), Blank.; 1/1v (=1v), woodcut.; 1/2r (=2r), "Dye prologhe de ouersettters vyt | den latyn in dyetsche. | G [to right, printed vertically] Odes vrese dije wyl mij omvaē. dat | [horizontally] ick altijt werkē moet bestaē ..."; 1/3v (=3v), line 3: "Dye voerspraec dees meesters dees boeckx daer | dit van worde te worde vuyt gheseyt es volght | hier nae. | [W]Ant veel lyen mids der armoeden ..."; 1/5v, [Table] "[D]ye eerste partikel dees boeckx spreeket van | de crachten der crudē ..."; 1/8v (=8v), Printer's device.; 2/1r (=9r), [woodcut], to left: "Absinthiū"; to right: "Alsen | [A]lsen of wit alsen of absinthiū es heet ..."; 22/4v (=172v), line 5: "Hier endet die eerste partikel dees boeckx | [woodcut]."; 23/1r (=173r), "Die tweede partikel des boeckx es vā medi= | cinen ..."; 27/4r (=208r), line 19, COLOPHON: "Ghemaeckt int iær ons | heerē .M. CCCC. en. lxxxiiij."; 27/4v (=208v), [woodcut].

VERY RARE. Printed by Johann Veldener [see note below]. The woodcuts which accompany each of the 150 plant descriptions are copies in reverse of those in the Latin edition printed by Schoeffer, Mainz, 1484.

Johann Veldener. (BORN: ; DIED: c1487) *Dutch printer.* Native of the Diocese of Würzburg, Veldener set up his first press in the town of Louvain in 1473. In 1478, he moved to Utrecht and reestablished his print shop there.

REFERENCES: BL: [IA 49330]. • BMC XV: 9, 162 [IA 49330]. • Campbell, *Annales de la Typographie*, 1874-90: no. 918. • Choulant, *Graphische Incunabeln*, 1858: p. 17, no. 13. • Goff: H-67. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8449. • Klebs, *Incunabula Scientifica*, 1938: no. 506.3. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 89-90, no. b. • Oates, *Cambridge 15th Century Books*, 1954: no. 3641. • Polain, *Catalogue*, 1932: no. 1879. • Proctor, *Index*, 1898-1906: no. 9158 [Kuilenburg]. (Veldener) ADB: 39, 571-2. • *Biografisch Woordenboek België*. • *Biografisch Woordenboek Nederland*. • BMC XV: ??, ?? . • Geldner, *Die deutschen Inkunabeldrucker*, 1968-70: 2, 319, 323-5 & 338-40. • *Lexikon des Buchwesens*: 2, ??.

2189. — Dutch, 1511.

[HERBARIUS] [In red:] Den herbarius | In Dijetsche [ornament] | [in black, large woodcut].

4^o: a-c⁶ d⁸ e⁴ f⁸ g-y^{8.4} z⁸ t⁴ A-D^{4.8} E⁴ (Gatherings in 6's and 8's are signed on \$1 and \$3, while gatherings in 4's are signed on \$1 only); 174ℓ.; no pagination or foliation. Gothic type.

CONTENTS: alr, Title.; alv, Blank.; a2r, "Dye prologhe des ouersettters. | wt den latijn in dyetsche | ..."; b1r, Text of herbs begins.; E3v, colophon: Gheprent tantwerpen doer die camer poert inden | gulden eenhoren bi my Willen vorsterman.; E4v, Printer's device.

VERY RARE. This second printing of the Dutch translation is known in only a few copies. It was printed by Willen Vorsterman.

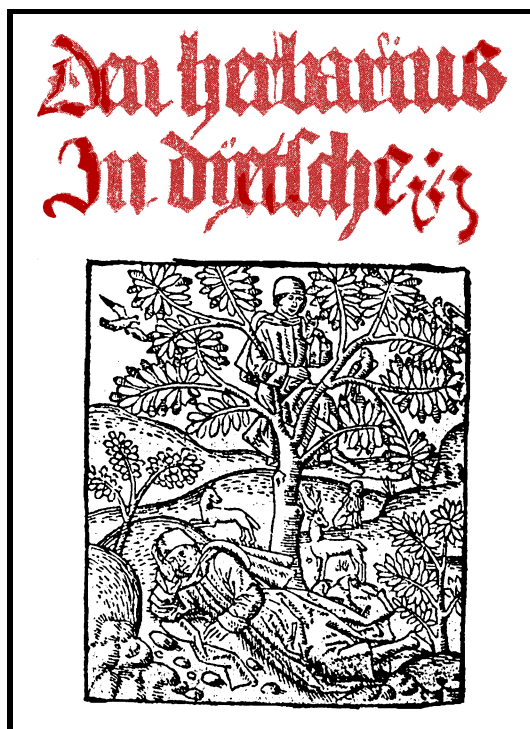
REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 17, no. 14. • Hunt Botanical Catalog: no. 13. • Nijhoff & Kronenberg, *Nederlandsche Bibliographie*: no. 1049 [wrong collation]. • Nissen (BBI): no. 2314.

Italian editions

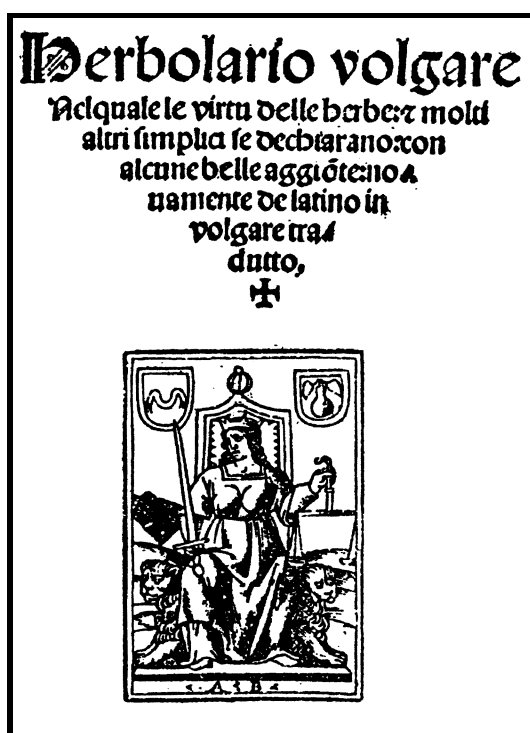
2190. Translation, First edition, 1522: [HERBARIUS] *Herbolario volgare* | *Acquale le virtu delle berbe:z molti | altri simplia le dichiarano:con alcune belle aggiote:no a namente de latino in volgare tra= | dutto, | †* [Woodcut, printer's device].

8^o: [8] p., 150ℓ. (numbered i-cl), [48] p., with 150 woodcuts and printer's device on the title and at end of text. PAGE SIZE: 156 x 102 mm.

RARE. First edition in Italian, with the woodcuts printed from blocks of the 15th century Latin editions,



DEN HERBARIUS IN DIJETSCH, 1511



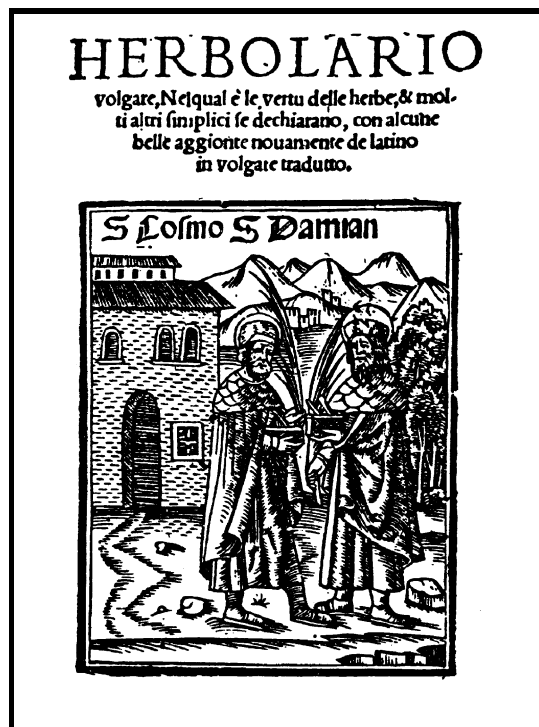
HERBOLARIO VOLGARE, 1522

HERBALS: HERBARIUS LATINUS

published in Italy. First edition of the Herbarius translated into Italian. A preface by the translator and an index of diseases with their remedies is newly added.

The woodcuts are printed from the same blocks already used in the Latin editions, published in Italy.

REFERENCES: Essling, *Livres à Figures Vénitiens*, 1907-14: 2, 1194. • Klebs, *Catalogue of Early Herbals*, 1925: no. 15. • Nissen (BBI): no. 2316. • NLM 16th Century Books (Durling): no. 2271. • NUC: 241, 470-1 [NH 0295051]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 88. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10764. • Wellcome Catalog (Books): 1, 163.



HERBOLARIO VOLGARE, 1534

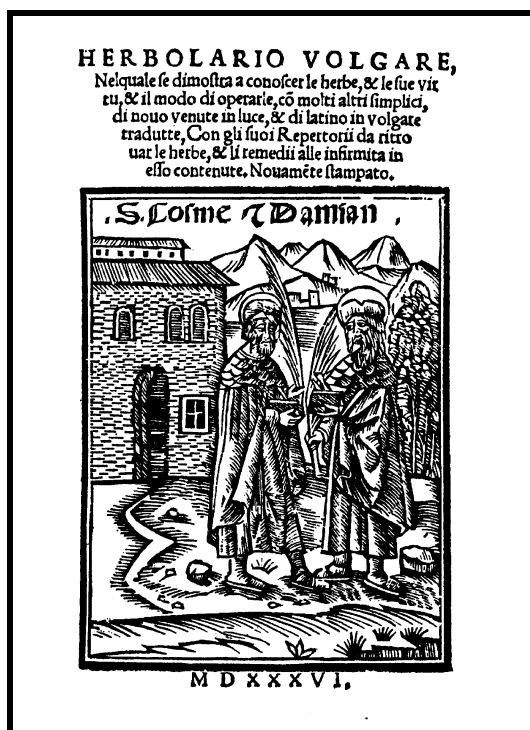
2191. Translation, 2nd edition, 1534: [HERBARIUS] Herbolario | volgare, Nelqual è le vertu delle herbe; & mol- | ti altri simplici se dechiarano, con alcune | belle aggiunte nouamente de latino | in volgare tradutto. | [Woodcut showing Saints Cosmo and Damian in a landscape].

8°: aa6 A-X8 Y6; 180l.; [12] p., 151l. (numbered i-lij), [46] p., with 151 woodcuts of plants, etc. With title woodcut (representing the Saints Damian and Cosmas in a landscape), woodcut of the Virgin and Child on aa6v and a full page woodcut of the Virgin Mary and Christ on 150. Printer's device on the last leaf. COLOPHON: Stampato ne Venetia, per Gioani Andrea Vauassore detto Guadagnino & fratelli, 1534.

CONTENTS: aalr (=1r), Title.; aa1v (=1v), "Alli lettori salute" [=preface of the translator.]; aa2r-aa2v (=2r-2v), "Prologo de lo Autore. | Mossio da priegi, ..." [=translation of Rogatu plurimorum.]; aa3r-aa6r (=3r-6r), "Tabula ordinata per alphabeto" [=index.]; aa6v (=6v), Woodcut of the Annunciation, enclosed within an ornamental frame.; A1r-T8v (=7r-158v), Text of the section on herbs.; V1r-X8v (=159r-174v), Text of the other sections.; Y1r-Y6r (=175r-180r), "Tabula ... a ogni egritudine."; Y6v (=180v), Blank.

RARE. Second edition of the Italian translation. The order of the herbs is slightly different than the 1522 edition. Two additional chapters are present: Mele (Honey) and Vino e aceto. The illustrations for these additions (one representing two tree trunks with bees, the other a wine cellar with casks) are not copied from any edition of the Herbarius, but are copied from the Latin Hortus Sanitatis. The title woodcut is probably printed here for the first time and copies of it appear in the later Herbolario editions. Essling reproduces two variants of this cut with the two medical saints (2, p. 462) from later editions of the Italian translation (1536 and 1539).

REFERENCES: Hunt Botanical Catalog: no. 34. • Klebs, *Catalogue of Early Herbals*, 1925: no. 16. • NUC: 241, 470-1 [NH 0295052].



HERBOLARIO VOLGARE, 1536

2192. — Italian, 1536.

[HERBARIUS] Herbolario Volgare | Nelqual se dimostra a conoscer le herbe, & le sue vir | tu, & il modo di operar e, cō molti altri simplici, | di nouo venute in luce, & di latino in volgare | tradutte, Con gli suoi Repertorii da ritrouar le herbe, & li remedii alle infirmita in | esso contenute. Nouamēte stampato | [Woodcut of Saints Cosmas and Damian] | M D XXXVI.

8°: ✱¹² A-Z⁸ AA⁴ (\$4 signed); 200l.; no pagination or foliation, with woodcut on the title page and 170 woodcuts in the text, 168 of which represent plants. COLOPHON (AA4): Stampato in Vinegia a santo Moyse al segno de | Langelo Raphaello, Per Francesco

di Alessan | dro Bindone, & Mapheo Pasini, compa | gni. Del mese di Giugno. Lanno | M D XXXVI.

VERY SCARCE. Third Italian edition, enlarged by an additional 20 plant description with accompanying woodcuts. It is the only edition of the *Herbarius* that has 170 woodcuts of plants.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 17, no. 15 [describes a copy without the title page]. • Cleveland *Herbal & Botanical Collections*, 1992: no. 48. • Essling, *Livres à Figures Vénitiens*, 1907-14: 2, 1195 [reproduces the first cut]. • Klebs, *Catalogue of Early Herbs*, 1925: no. 17. • Nissen (BBI): no. 2316. • NLM 16th Century Books (Durling): no. 2271. • NUC: 241, 470-1 [NH 0295054-5]. • Payne, *'Herbarius' and 'Hortus Sanitatis'*, 1901: p. 88. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10765. • Sallander, *Bibliotheca Walleriana*, 1955: no. 4362. • Wellcome Catalog (Books): 1, 3104.

2193. — Italian, 1539.

[HERBARIUS] *Herbolario volgare*, Nelqual è dimostza a conoscer la herbem & le sue virtu: & il di oparario: con molti altri simplici: di novo venute in luce: & di latino in volgare tradutte: con gli suoi repertorii da ritrovar le herbe: & li remedii alle infirmita in esso contenute: con alchune altre notabile additioni agionte che ne gli altri non li sono ... [Venetia, Giovan Maria Palamides, 1539].

8°: [12] p., 151 ℓ . (numbered i-151), [44] p; 179 leaves, with title woodcut of Saints Cosmas and Damian, full page woodcut on leaf 6v (Annunciation) and 151 woodcuts of plants in the text. Printer's device (Saint John the Baptist) on the last leaf.

VERY SCARCE. Fourth edition of the Italian version. An almost exact reprint of the 1534 edition. Becher catalog: "All the woodcuts are derived from the Latin *Hortus Sanitatis*, but are not printed from the blocks used in the 1534 edition. The text of the first page printed in red except for the first word. The woodcuts 109, 143, and 149 are slightly different fro the corresponding ones in the 1534 edition; woodcuts 2-3 are exchanged by misprint."

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 18, no. 16. • Essling, *Livres à Figures Vénitiens*, 1907-14: 2, 1196. • Klebs, *Catalogue of Early Herbs*, 1925: no. 18. • Nissen (BBI): no. 2318. • NUC: 241, 470-1 [NH 0295057]. • Payne, *'Herbarius' and 'Hortus Sanitatis'*, 1901: p. 88. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10766 [incorrect collation].

2194. — Italian, 1540.

[HERBARIUS] *Herbolario | volgare*, Nelqual è le vertu delle herbe; & mol- | ti altri simplici se dechiarano, con alcune | belle aggonte nouamente de latino | in volgate tradutto. | [Woodcut showing Saints Cosmo and Damien in a landscape].

8°: aa⁶ A-X⁸ Y⁶; 180 ℓ .; [12] p., 151 leaves (numbered i-clj), [46] p., with 151 woodcuts of plants, etc. With title woodcut (representing the Saints Damian and Cosmas in a landscape), woodcut of the Virgin and Child on aa6v and a full page woodcut of the Virgin Mary and Christ on 150. COLOPHON (Y6r): Stāpato ne la inclita citta di Venetia con accuratissima

diligentia per Gioanni Maria Palamides Nell' anno M.D.XL. Registro.

CONTENTS: aa1r (=1r), Title.; aa1v (=1v), "Alli lettori salute" [=preface of the translator]; aa2r-aa2v (=2r-2v), "Prologo de lo Autore. | Mosso da priegi, ..." [=translation of Rogatu plurimorum]; aa3r-aa6r (=3r-6r), "Tabula ordinata per alphabeto" [=index]; aa6v (=6v), Woodcut of the Annunciation, enclosed within an ornamental frame.; A1r-T8v (=7r-158v), Text of the section on herbs.; V1r-X8v (=159r-174v), Text of the other sections.; Y1r-Y6r (=175r-180r), "Tabula ... a ogni egritudine."; Y6v (=180v), Blank.

RARE. Printed in Venice by Giovan Maria Palamides in 1540.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 18-9, no. 17. • Hunt Botanical Catalog: no. 46. • Nissen (BBI): no. 2319. • NUC: 241, 470-1 [NH 0295058]. • Payne, *'Herbarius' and 'Hortus Sanitatis'*, 1901: pp. 88-9. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10767.

2195. — Italian, 1555.

[HERBARIUS] *Herbolario | volgare*, Nelqual e le virtv delle herbe, & mol- | ti altri simplici se dechiarano, con alcune | belle aggonte nouamēte de latino | in volgare traduto. | [Woodcut showing Saints Cosmo and Damien in a landscape].

8°: aa⁶ A-X⁸ Y⁶ (Y6 blank); 180 ℓ .; no pagination, with title wood cut of the Saints Cosmas and Damian, and a woodcut of the Annunciation, enclosed within an ornamental border on leaf aa6v, and 151 woodcuts of plants in the text.

CONTENTS: aa1r (=1r), Title.; aa1v (=1v), "Alli lettori salute" [=preface of the translator]; aa2r-aa2v (=2r-2v), "Prologo de lo Autore. | Mosso da priegi, ..." [=translation of Rogatu plurimorum]; aa3r-aa6r (=3r-6r), "Tabula ordinata per alphabeto" [=index]; aa6v (=6v), Woodcut of the Annunciation, enclosed within an ornamental frame.; A1r-T8v (=7r-158v), Text of the section on herbs.; V1r-X8v (=159r-174v), Text of the other sections.; Y1r-Y6r (=175r-180r), "Tabula ... a ogni egritudine."; Y6v (=180v), Blank.

RARE. Fifth edition of the Italian edition printed in Venetia by Giovanni Padoana. The woodcuts are printed from the blocks of the 1539 edition, including the title woodcut. The annunciation cut appears for the first time (without border) in an (Italian) Life of the Virgin, 1492. Klebs/Becher says that the signatures A-U are made up of quires from the 1540 edition, while the other signatures are reset.

REFERENCES: Graesse, *Trésor de Livres Rares*, 1859-69: 3, 245. • Hunt Botanical Catalog: no. 75. • Klebs, *Catalogue of Early Herbs*, 1925: no. 19. • Nissen (BBI): no. 2320. • NUC: 241, 470-1 [NH 0295060].

2196. Variant edition, 1555: [HERBARIUS] *Herbolario | Volgare: | Nel Qvale Le Virtv Delle | herbe: & molti altri simplici | se dechiarano: con alcune | belle aggonte noua- | mēte de latino | in volgare traduto. | [ornament] | [Printer's mark]*.

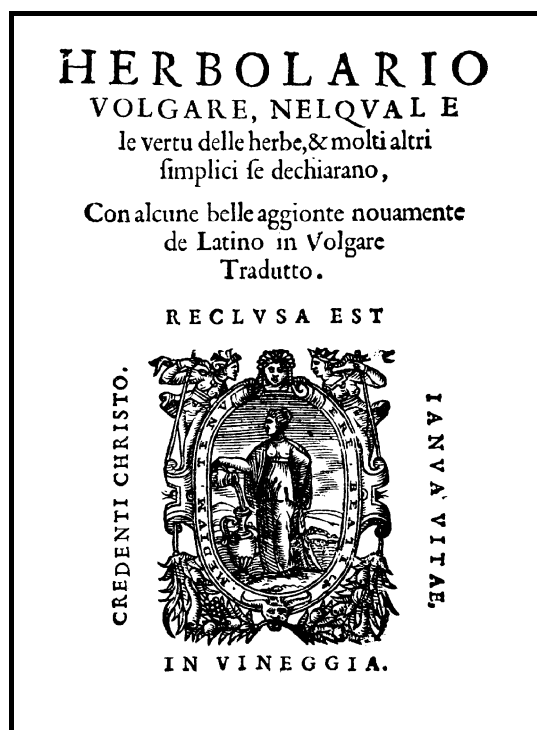
8°: aa⁶ A-X⁸ Y⁶ (\$4 signed; Y6 blank); 180 ℓ .; no pagination or foliation, with a printer's device (depicting Temperance) on the title page, 151 woodcuts of plants in the text and on leaf 6v a woodcut of a scholar sitting at his desk, attended by four others standing. COLOPHON (Y5v): ☛ Stampato in Venetia | per gli Heredi di Gio= | anne Padoano. | M D L V.

VERY RARE. A different edition of the 1555 edition. Several chapters are illustrated with different woodcuts of the plants than in the the other 1555 edition. The title

HERBALS: GART DER GESUNDHEIT

contains a printer's device and the cut of the Annunciation is replaced by a different cut of a scholar.

REFERENCES: Cleveland Herbal & Botanical Collections, 1992: no. 76. • Klebs, *Catalogue of Early Herbals*, 1925: no. 20. • Nissen (BBI): no. 2319.



HERBOLARIO VOLGARE, 1565

2197. — Italian, 1565.

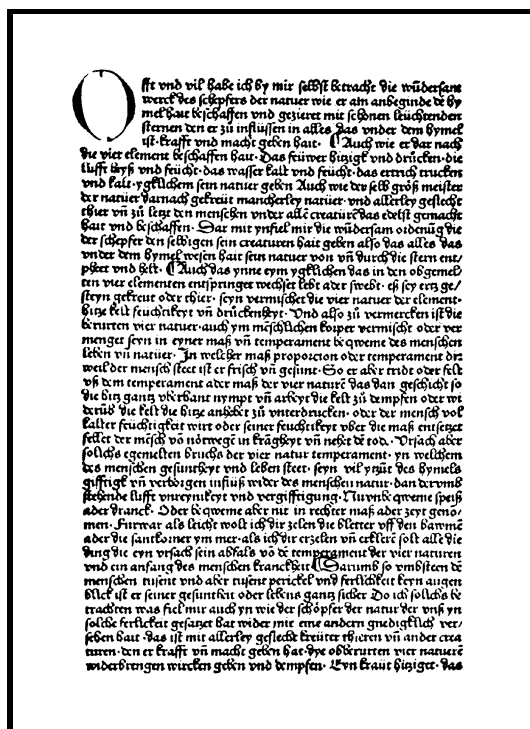
[HERBARIUS] Herbolario | Volgare, Nelqval E | le vertu delle herbe, & molti altri | simplici se dechiarano, | Con alcune belle aggiunte nouamente | de Latino in Volgare | Tradutto. | Reclvsa Est | [Left-hand side of ornament, vertical text reading bottom to top:] Credenti Christo. | [Right-hand side of ornament, vertical text reading top to bottom:] Ianva Vitae. | [ornament] | In Vineggia.

8°: aa⁸ A-Y⁸; 182ℓ.; no pagination or foliation. Printer's device on the title page, with 151 woodcuts of plants, etc. contained in the text.

RARE. The eighth edition and last of the early herbals to be published. The woodcuts are taken from the blocks of the 1539 edition, with only a few being different.

REFERENCES: Klebs, *Catalogue of Early Herbals*, 1925: no. 21. • Nissen (BBI): no. 2321. • NUC: 241, 470-1 [NH 0295061]. • Plesch, *Stiftung für Botanik Auction*, 1975-6: no. 338.

Gart der Gesundheit



GART DER GESUNDHEIT, 1485

2198. — German, 1485 [First edition].

[GART] Gart der Gesundheit ... Mainz, [Peter Schoeffer], 28 March 1485.

2°: 1-43⁸ 44-45⁴ 46⁸ (unsigned; 46/8 blank); 360ℓ.; no pagination, foliation or signiation marks. Capital spaces. Full-page woodcut on the verso of the first leaf (three sitting savants, attended by ten standing men and blank heraldic shield above) a smaller cut before the fourth part (a physician holding a urine flask and a women with a hamper), 368 cuts of plants and 11 of animals. PAGE SIZE: 288 x 202 mm.

CONTENTS: 1/1r (=1r). Blank.; 1/1v (=1v), Full-page woodcut showing 13 figures surmounted by an arch decorated with foliage and other ornaments, from which hangs a blank shield.; 1/2r-1/3v (=2r-3v), Preface, with text starting: "[O]fft vnd vil habe ich by mir selbst betracht die wundersam | werck des schepfers der nature ..."; 1/4r-46/7r, Text in 435 chapters.; 46/7v, COLOPHON (in red): "Disser Herbarius ist czu | menc3 gedruockt vnd geen= | det uff dem xxvij dage des | merc3. Anno. M. cccc. lxxxv. | [printer's device]."; 46/8 (=360), Blank.

EDITIO PRINCEPS. Extremely rare. The second herbal to be printed by Peter Schoeffer came from his press at Mainz on the 28th of March, 1485. It immediately eclipsed all previous works of a similar nature, and formed the foundation for all herbals that followed it. Although it bore no title page, Der Gart was clearly and definitively named by Schoeffer in the book's own foreword. There it was called *Ortus Sanitatis* and its German equivalent, *Gart der Gesuntheit*, the Garden of Good Health. Despite that fact, cataloguers

and bibliographers, for nonsensical reasons best left to them to explain, decided to call the work variously *Herbarius zu Teutsch*, *Hortus Sanitatis Germanice*, and the *Smaller Hortus* or *Hortus Minor*. None of that identified the book properly, but it did succeed in confusing three entirely separate publications, Schöffer's *Herbarius* and *Gart der Gesundheit*, and Meydenbach's *Hortus Sanitatis* of 1491. The works held 150, 435, and 1066 chapters respectively, so it is impossible to understand how anyone could fail to distinguish them. Nothing, however, is beyond the powers of the cloistered specialists. It was not until 1925, when Arnold Klebs established the system of referring to the books as the *Herbarius*, *Der Gart*, and the *Hortus*, that the tangle was resolved. The sad fact remains, though, that not all libraries have taken Klebs's advice even as yet.

The 435 chapters of *Der Gart* are written in the dialect of southern Germany, 368 of them dealing with plants of medicinal value; and eleven with animal substances. Each of those is illustrated with a woodcut picturing its subject, and the majority are highly identifiable, well drawn, and artistically executed. Understandably the cuts of material outside the artists' direct experience are either poorly done or fictitious. That was a consequence of their arrival in Europe, from distant parts of Asia and Africa, in dry, shrunken, broken, or powdered condition. Some fifty-six chapters were left unillustrated since their commonly known substances, such as cheese, water, flour or lead, did not seem to call for picturization. Among them are four liquids, fourteen items of animal origin, fifteen plant drugs and products, and twenty-three minerals.

The artist responsible for the designs remains unknown, although the name of Erhard Reuwich, or his studio, is most often put forward on stylistic grounds. That remains debatable in the absence of any contract or other record. The same anonymity attaches to the text, which is obviously a compilation, and of which no original manuscript exists. There are, however, some signs of a single guiding editorial intelligence in the consistency of stylistic mannerisms and certain practices. For instance, none of the extracts from earlier works, save for direct quotations, have been allowed to stand in a raw, unrevised state. There is also evidence of cleverly concealed padding through the use of rare synonyms to disguise repeated matter; for example, Tormentill also appears as Filla, and Manna as Tereniabin. These appear to be a deliberate contrivance since more common synonyms, but easily recognizable ones, were available. The name of one physician who would have been familiar with such terms actually appears in Chapter 76, on Armenian bole, as Master Johan van Cube. This has been thought to refer to one of Schöffer's associates, Johann Wonnecke van Caub, Town Physician of Frankfurt, site of Schöffer's home. No record exists, however, that substantiates such an identification.

In the meantime, while *Der Gart*'s mysteries may persist, the work remains a masterpiece, and is the

earliest printed monument of scientific illustration.

REFERENCES: BMC XV: 1, 35 [IB 242]. • Choulant, *Graphische Incunabeln*, 1858: p. 55-6, no. 1. • Goff: G-97. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8948* [wrong collation]. • Hunt Botanical Catalog: no. 5. • Klebs, *Incunabula Scientifica*, 1938: no. 507.1. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 43, no. 1. • Klebs, *Catalogue of Early Herbals*, 1925: no. 22. • Nissen (BBI): no. 2266. • NUC: 255, 431-4 [NH 0533410]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. ?? • Proctor, *Index*, 1898-1906: no. 123. • Schmutzer, R., "Aus dem 'Hortus Sanitatis' von 1485. Ein Beitrag zur tierärztlichen Inkunabelforschung," *Archiv für Geschichte der Medizin*, 15 (1923), 78-84. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 14, nos. 189-569. • Schreiber, *Kräuterbücher*, 1924: x-xiii. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4332. • Schullian & Sommer, *Catalogue of Incunabula*, 1948: no. 200. • Stillwell, *Awakening Interest in Science*, 1970: G-87. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 67.

2199. Reprint, 1924, 1485: [GART] Hortus sanitatis / deutsch. Peter Schoffer / Mainz 1485 / [Faksimile ausgabe, Munchen, Verlag der Munchener drucke, 1924].

360ℓ. including blank leaf at end, frontispiece, illus., lxii, [2] p.

VERY SCARCE. Herbarius. Krauterbucher des funfzehnten und sechzehnten jahrhunderts. Binder's title. Colophon of facsimile (leaf [359] verso, col. 2) in red: Differ Herbarius ift czu // mencz gedruckt vnd geen. // det uff dem xxvij dage des // mercz. Anno, M.cccc.lxxxv. // [Schoffer's mark]. Appended: W. L. Schreiber. Die krauterbucher des xv. und xvi. jahr-hunderts. lxii, [2] p. (p. lvii-lxii: "Orts und drucker-(verleger-) verzelchnis"). Colophon on verso of last leaf of the volume: [Mark of Munchner drucke] Diese faksimileausgabe des // Hortus sanitatis / Deutsch // Peter Schoffer / Mainz 1485 // wurde von der Mandruck a.-g. in Munchen // im herbst 1924 in 300 exemplaren fur den // Verlag der Munchner drucke zu Munchen // hergestellt. Das nachwort druckte // dr. C. Wolf & sohn, Munchen. Commonly attributed to Ioannes de Cuba, (i.e. Johannes Wonnecke or Dronnecke of Caub); a different work from the Latin Hortus sanitatis[maior] first published by Jacob Meydenbach, Mainz, 1491, and from the Herbarius of 1484.

REFERENCES: NUC: 255, 431-4 [NH 0533412].

2200. — German, 1485 [22 August].

[GART] Der Gart der Gesundheit ... Augspurg, [Schönsperger], 22 August 1485.

2°; a-z⁸ A-V⁸ T⁸ V⁸ X¹⁰ (X10 blank); 370ℓ.; no pagination or foliation. Gothic letter, 38 lines, capital spaces. Full-page woodcut on the verso of the first leaf (three sitting savants, attended by ten others), a smaller cut on the recto of leaf 341 (physician holding a urine flask and a women) and hundreds of text cuts representing plants and animals. PAGE SIZE: 305 x 210 mm.

CONTENTS: a1r, Blank.; a1v, Woodcut.; a2r, "Offt vnd vil hab ich beÿ mir selbs betracht dÿe wū | dersame werck des schepffers der natur ..."; X9r, COLOPHON: "¶ Hÿe hat ein end der herbarius | in der keyserlichen statt Augsp | urg Gedruckt vnd vollendet an | montag nechst vor BVartholo | mei nach Cristi gepurt M. cccc | lxxxv."; X10, Blank.

VERY RARE. Second edition of *Der Gart* and the first issued by Schönsperger. It is a rapidly prepared reprint (within 5 months) of Schoeffer's first edition dated March 28 of the same year. The speed with which the original was pirated is a testament to the efficiency of an early press and indicates that several

HERBALS: GART DER GESUNDHEIT

compositors must have been employed on the project. However, because Schönsperger at the time only had access to a large type, the book increased from 369 leaves, instead of Schoeffer's 359. In time Schönsperger became the most productive of the early printer of Herbals, with eight or nine different editions coming from his press between 1485 and 1499, or more than half of the German editions published that century.

The woodcuts are copies of Schoeffer's originals, mostly reversed and somewhat smaller. Choulant believes these illustrations to be of better quality than Schoeffer's. The full-page woodcut on the verso of the first leaf is an almost exact copy of the Mainz edition but with the shield at the top containing a pine-cone, the arms of Augsburg.

Johann Schönsperger. (BORN: ; DIED:) *German printer.* Schönsperger's earliest dated book is 1 September 1481, and he continued to print into the sixteenth century.

REFERENCES: BMC XV: 2, 365 [IB 6287]. • Choulant, *Graphische Incunabeln*, 1858: p. 56, no. 2. • Goff: G-98. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8949*. • Klebs, *Incunabula Scientifica*, 1938: no. 507.2. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 44, no. 2. • Klebs, *Catalogue of Early Herbals*, 1925: no. 23. • Nissen (BBI): no. 2267. • NUC: 255, 431-4 [NH 0533413]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10824. • Proctor, *Index*, 1898-1906: no. 1763. • Schreiber, *Kräuterbücher*, 1924: xiii-xiv. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4333. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 68. (Schönsperger) BMC XV.



GART DER GESUNDHEIT, 1486 (AUGSBURG)

2201. — German, 1486 [5 June].

[GART] Der Gart der Gesundheit ... Augsburg,

Johann Schönsperger, 5 June 1486.

2°: a-i⁸ k-t⁶ v-z⁸ A-D⁸ E⁶ F⁸ G-H⁶ I⁷ (I⁷ blank); 258ℓ.; no pagination or foliation. Two column, Gothic letter, 42 lines, with full-page woodcut on the verso of the first leaf (three sitting savants with two attendants in a chemist's shop, behind them an apprentice with a mortar), a smaller cut (a physician with a urine flask and a women), and 394 other text woodcuts of plants and animals.

VERY RARE. This is Schönsperger's second printing of *Der Gart*, and has substantial differences from the first, which was simply a copy of the original Schoeffer edition. Here the format has been completely changed by reducing the size of the illustrations to fit onto double-columned pages. That practice not only effected a saving in paper costs, but also resulted in a book of a much handier size. So successful was this adaptation that Schönsperger issued it eight times in all between 1486 and 1502.

Ten new woodcuts were added to the book, and one, Bone from a Deer's Heart, was redesigned, while both the frontispiece and the heading for the Book of Urines were altered, the latter only slightly. In the case of the frontispiece Schönsperger reduced the number of physicians shown to only five, and placed them inside an apothecary's shop where an assistant was preparing herbs, rather than in the garden setting that they had originally inhabited.

The woodcuts of this edition possess a high degree of artistry and some features of note. The appearance of silver, for instance, has been cleverly counterfeited by the use of powdered tin, and is still untarnished after nearly 500 years. And in the image of the gourd, Cucurbit, the typical white flower is portrayed accurately by reserving a blank space for it against a green leaf, a detail that demonstrates to perfection the quality of medieval craftsmanship.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 58, no. 6. • Goff: G-100. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8951*. • IGI: no. 4906. • Klebs, *Incunabula Scientifica*, 1938: no. 507.5. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 44, no. 3. • Klebs, *Catalogue of Early Herbals*, 1925: no. 24. • Nissen (BBI): no. 2268. • NUC: 255, 431-4 [NH 0533415]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10826. • Schreiber, *Kräuterbücher*, 1924: xvi-xvii. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4335. • Sudhoff, *Bibliographia Paracelsica*, 1894: no. 69.

2202. — German, 1485/1486.

[GART] Der Gart der Gesundheit ... Strassburg, Johann (Reinhard) Grüninger, 1485/1486.

2°: a-z⁸ A-C⁸ [1-2⁸] (the last two quires unsigned; 2/8 blank); 224ℓ.; no pagination or foliation. Two column, Gothic letter, 43 lines, capital spaces. Full-page woodcut at the beginning (three savants sitting, attended by nine others), smaller cut (physician and women), 384 text cuts of plants and animals. PAGE SIZE: 207 x 189 mm.

CONTENTS: a1r, Woodcut.; a2v, Blank.; a2r, "[O]fft vnd | vil habe | ich by mir selbst | betracht dy wū | dersam werck | des schöpfers d' | natuer wie er am anbeginde dē hy- | mel hat beschaffen vñ gezyeret mit | schönen

leuchtendē steren ..."; C7v (=207v), column 1, part 6: "Hie nach volget das | funffte teyl vnnd das lest diß büchs. | vnd ist ein register behende zu finden | von allen krancgheyten der menschē ..."; 2/5r (=221r), column 2: "Diß sint die capitelder | kruter nach ordnung des alphabets ..."; 2/8v (=227v), END: "Zucarum zucker. Capitulu. cccxxv."

VERY RARE. Schoeffer's *Der Gart* inspired a second plagiarism of the original with the issuance of Johann Grüninger's edition at Strassburg. Although it bears no date it is virtually certain that it was published in 1486 and almost at the same time as the Augsburg version by Schonsperger. Because of the date's omission, controversy about priority of publication between these two plagiarisms has continued to the present. Since Schodgsperger had already issued an exact copy of *Der Gart* in 1485 it is entirely possible that his previous familiarity with the work gave him a slight edge in beating out Grüninger to the bookstalls. As Arnold Klebs, the noted bibliographer, has stated elsewhere, the notion of a more economical format may very well have occurred to both printers simultaneously out of the natural logic flowing from their own experience. But only one observation can be made with certainty, namely, that while both copied Schoeffer neither copied the original cuts of each other.

Grüninger added only five woodcuts of his own, and eliminated but one physician from his adaptation of the frontispiece. What is more, some of his chapter headings are left blank although model illustrations for them were already available. Despite its slightly restricted repertoire of im-ages this edition served as the model for Conrad Dinckmut's publication in 1487, and later for that of Michael Furter at Bash, c. 1490. Through this latter work it influenced the pictorial style of the famous French herbal, *Arbolayre*, later called the *Grant Herbier*, and also its English translation, *The Grete Herball*.

Only one copy of the original edition is known in the United States, and there is no record of any having received contemporary coloring. Yet despite the extreme rarity of the Grüninger original its use by other printers has made its woodcuts the most familiar and widely distributed among the early herbals before those of Brunfels and Fuchs in the sixteenth century.

Johann (Reinhard) Grüninger. (BORN: ; DIED: Strassburg, Alsace, France, 1529?) *German printer.* Grüninger's earliest dated book is the Petrus Comestor's *Historia Scholastica*, completed 28 August 1483.

REFERENCES: BMC XV: 1, 103 [IB 1508]. • Choulant, *Graphische Incunabeln*, 1858: p. 56, no. 3. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: 2, no. 3178. • Goff: G-99. • Klebs, *Incunabula Scientifica*, 1938: no. 507.3. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 45, no. 6. • Klebs, *Catalogue of Early Herbals*, 1925: no. 25. • Nissen (BBI): no. 2278. • Plesch, *Stiftung für Botanik Auction*, 1975-6: no. 365. • Proctor, *Index*, 1898-1906: no. 497. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 20, p. 24. • Schreiber, *Kräuterbücher*, 1924: xiv-xv. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4334. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 80 [Prüss]. (Grüninger) ADB. • BMC XV.

2203. — German, 1486/1487.

[GART] *Der Gart der Gesundheit* ... Basel, Michael

Furter about 1486/1487.

2°: 224 leaves (the last blank). Two columns, Gothic letter, 43-44 lines, with full-page woodcut (assembly of 12 physicians, three sitting and nine standing), smaller cut of physician and a woman, and hundreds of text cuts of plants, animals, etc. Floreated initial letters.

VERY RARE. The only herbal to be printed in Switzerland before 1500 and is nearly an exact reprint of Grüninger's edition of 1485/1486, showing only slight variations of orthography. The cuts with chapter numbers are printed from Grüninger's woodblocks. The full-page woodcut is reversed from Grüninger's edition while the heraldic shield is left blank. Furter adds for the first time floreated woodcut initials, white on black, to most of the chapters. There exists some connection between between this edition and the first French herbal (*Arbolayre*, Besançon, Metlinger) where the same woodcuts and initials are used.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 57, no. 4. • Goff: G-101. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8947*. • Klebs, *Incunabula Scientifica*, 1938: no. 507.4. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 46, no. 10. • Klebs, *Catalogue of Early Herbals*, 1925: no. 28 [dates the work about 1490]. • Nissen (BBI): no. 2281. • NUC: 255, 431-4 [NH 0533416]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10822. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 22, p. 45. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4341.



GART DER GESUNDHEIT, 1487 (ULM)

2204. — German, 1487 [31 March].

[GART] *Der Gart der Gesundheit* ... Ulm, Conrad

HERBALS: GART DER GESUNDHEIT

Dinckmut 1487, Samstag vor Judica (31 March).

2°: a-z⁸ A-D⁸ E⁶ F-G⁸ H¹⁰ (H10 blank); 248ℓ.; no pagination or foliation. Two columns, Gothic letter, 40 lines, with full-page woodcut (assembly of 12 physicians) on the verso of leaf one, smaller woodcut (physician holding urine-flask, and a woman) on leaf F2, and 393 woodcuts plants, animals, etc. COLOPHON (H9r): "Gedruckt vnd vollendet seligklichen diser | Herbarius. Durch Conraden Dinckmut zu | Ulm. Am samstag vor Judica. Als man zalt | nach Christi vnsers herren geburt Tausent | vierhundert vnd sibendachtzig Jare. | Gottsey lob." PAGE SIZE: 284 x 202 mm.

CONTENTS: a1r, Blank.; a1v, Woodcut.; a2r, "[O]fft vñ vil hab | ich bey mir se | lbs betrachtet | die wundersamen | werck des schöpfers der naturen | ..."; E6r (=222r), col. 2, line 33: "... in seinem büch de in | genio sanitatis."; F1r (=223r), "Disz ist das dritteil disz | büchs. vñ ist ain register zefinden | kreüter die do laxiren ..."; (=224r), col. 2: "Disz ist das vierde teil | dif büchs ..."; H9r (=247r), COLOPHON: "Gedruckt vnd vollendet seligklichen diser | Herbarius. Durch Conraden Dinckmut zu | Vlm. Am samstag vo Iudica. Als man zalt | nach Christi vnsers herren geburt Tausent | vierhundert vnd sibendachtzig Jare. | Gott sey lob."

VERY RARE. The only herbal edition printed by Conrad Dinckmut [see note below]. The woodcuts have a resemblance to the corresponding ones in the Grüninger's edition. Klebs/Becher believes the Grüninger edition to be earlier than Dinckmut's edition because the woodcuts in the later are cruder and appear to have copied from the former and not vice versa. Dinckmut's edition contains also five woodcuts to chapters 37, 50, 142-144 which appear already in Grüninger's edition but are not found in Schoeffer's herbal. Of these chapters, Schönsperger illustrated only chapter 37, 50 and 143, but with cuts different from Grüninger's edition.

The full-page woodcut is likewise copied from the one in Grüninger's edition, reversed and with slight differences, the shield for instance is not blank, but contains the arms of Ulm. Eight woodcuts (to chapters 38-40, 42, 44, 48-49, and 81) have no corresponding ones in either the Schoeffer or Grüninger editions, and are instead copied from Schönsperger.

Dinckmut's books are all very rare and in great demand by collectors.

Conrad Dinckmut. (BORN: ; DIED:) *German printer.* Dinckmut seems to have begun his career as a printer around 1482, when he produced at least four books, but he is listed as a 'Buchdrucker' in the Ulm rate-lists of 1476, and a calendar for 1478, which is in his type and presumed to have been printed by him. He continued to print at Ulm through 1496. He left the city in 1499.

REFERENCES: BL: [IB 9359]. • BMC XV: 2, 535-6 [IB 9359; imperfect copy]. • Choulant, *Graphische Incunabeln*, 1858: p. 58-9, no. 8. • Goff: G-103. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8952*. • Hunt Botanical Catalog: no. 6. • Klebs, *Incunabula Scientifica*, 1938: no. 507.7. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 45, no. 5. • Klebs, *Catalogue of Early Herbals*, 1925: no. 26. • Nissen (BBI): no. 2280. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10827. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 6, nos. 178-573. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4338. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 71. (Dinckmut) BMC XV.

2205. — German, 1487 [7 March].

[GART] Der Gart der Gesundheit ... Augsburg, Johann Schönsperger, 7 March 1487.

2°: 258ℓ. VERY SCARCE.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 58, no. 7. • Goff: G-102. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8950. • Klebs, *Incunabula Scientifica*, 1938: no. 507.6. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 44, no. 4. • Nissen (BBI): no. 2269. • NUC: 255, 431-4 [NG 0533417]. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4337. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 70.

2206. — German, 1488.

[GART] Der Gart der Gesundheit ... Augsburg, Johann Schönsperger, ca. 1488.

2°: 258ℓ. VERY SCARCE.

REFERENCES: Hain, *Repertorium Bibliographicum*, 1826-38: no. 8945. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 45, no. 7. • Nissen (BBI): no. 2270. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 77.

2207. — German, 1488 [15 December].

[GART] Herbarius zû teüt | sch vnd von aller | handt kreüteren.

2°: [*]⁴ a-z⁸ A-D⁸ E⁶ F⁸ G-H⁶ I⁸ (I8 blank); 262ℓ.; no pagination or foliation. Two columns, Gothic letter, 42 lines, with full-page woodcut on the recto of leaf 5 (five physicians in a chemist's shop, behind them an apprentice with a mortar) and hundreds of text cuts of plants and animals. PAGE SIZE: 256 x 187 mm.

CONTENTS: [*]1r, Title.; 17v, COLOPHON: "Gedruckt vnd volendet dýserlichen statt | zû Augspurg am montag vor | san Thomas tag. Anno. M. cccc | vnd in dem. lxxxvij. jare."

VERY RARE. Printed in Augsburg by Johann Schönsperger on the 15 December 1488. This edition shows for the first time a separate title, followed by an alphabetical table of German names of plants, which is a new addition. The text begins on the recto of leaf 8. The full-page woodcut, the woodcut before the urine tract (physican and woman) and the woodcuts in the text are the same as in Schönsperger's second edition of 1486.

REFERENCES: BMC XV: 2, 366 [IB 6303; imperfect copy]. • Choulant, *Graphische Incunabeln*, 1858: p. 59, no. 10. • Goff: G-104. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8953* [includes H 8945*]. • Klebs, *Incunabula Scientifica*, 1938: no. 507.8. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 45-6, no. 8. • Klebs, *Catalogue of Early Herbals*, 1925: no. 27. • Nissen (BBI): no. 2271. • NUC: 255, 431-4 [NH 0533418]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10828. • Proctor, *Index*, 1898-1906: no. 1770. • Schreiber, *Kräuterbücher*, 1924: 5, 4340 [includes no. 4339]. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 72.

2208. — German, 1489.

[GART] Der Gart der Gesundheit ... Strassburg, Johann Grüninger um 1489.

2°: 224ℓ. VERY SCARCE.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 57, no. 5. • Goff: G-108 [n.d.]. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8946*. • Hunt Botanical Catalog: no. 301 [about 1500]. • Klebs, *Incunabula Scientifica*, 1938: no. 507.9 [1489]. • Klebs, *Herbals of the*

Fifteenth Century, 1917-8: p. 46, no. 9. • Nissen (BBI): no. 2279. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 20, nos. 661-940. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4336 [Anshelm?, about 1487]. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 78.

2209. — German, 1493 [13 August].

[GART] Herbarius zu teüt | sche vnd von alter | handt kreüterten.

2°: 260 leaves (the last two blank). Two columns, Gothic letter, 42 lines, with hundreds of text woodcuts of plants, animals, etc.

VERY RARE. Printed in Augsburg by Johann Schönsperger on the 13 August 1493. Klebs/Becher: "There exist two different Schönsperger editions, both issued, according to their colophons, on the "Affermontag nach Tyburcij," 1493 (=13 August), which are separately quoted by Sudhoff and Klebs. Hains 8954 mentions the variant in a note. Klebs rants this edition after the other variant. It represents, according to Klebs and Sudhoff, a new issue containing unchanged only the make-up of the signatures: d, h, k, p-J."

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 61, no. 13. • Goff: G-105. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8954*. • IGI: no. 4907. • Klebs, *Incunabula Scientifica*, 1938: no. 507.11. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 47-8, no. 13. • Klebs, *Catalogue of Early Herbals*, 1925: no. 29. • Nissen (BBI): no. 2272. • NUC: 255, 431-4 [NH 0533419]. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4342. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 73.

2210. Variant edition, 1493: [GART] Herbarius zu teütsche/ vnnd von allerhandt kreüterten ... Augsburg, Johann Schönsperger, 13 August 1493.

2°: 262ℓ. Two columns, Gothic letter, 42 lines, with hundreds of text woodcuts of plants, animals, etc.

VERY RARE. A variant edition of the previous title. Klebs/Becher: "It uses a somewhat different type with many variations in orthography, especially in the use of i and y. The chapter headings are printed with another Gothic type, considerably smaller than the previous edition, in which the headings always begin with a large initial, while most of the headings of this edition begin with small letters. The misprint at the beginning of the preface: '... weercke' seems to be found only in this edition."

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 61, no. 13. • Goff: G-105. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8954n. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 47, no. 12. • Klebs, *Catalogue of Early Herbals*, 1925: no. 30. • Nissen (BBI): no. 2273. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 74.

2211. — German, 1496 [10 May].

[GART] Herbarius zu teütsche | vnnd von allerhandt kreüterten.

2°: 262 leaves (the last two blank). Two columns, Gothic letter, 39 lines, with full-page woodcut (group of five savants in pharmacy, behind them an apprentice), and hundreds of text woodcuts of plants, animals, etc.

VERY RARE. Printed in Augsburg by Johann Schönsperger on the 10 May 1496. Reprint of Schönsperger's second edition of 1486 with the same woodcuts, to which several small ones are added. Initial letter at the beginning.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 60, no. 12. • Goff: G-106. • Hain, *Repertorium Bibliographicum*, 1826-38: no. 8955*. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 48, no. 14. • Klebs, *Catalogue of Early Herbals*, 1925: no. 31. • Nissen (BBI): no. 2274. • NUC: 255, 431-4 [NH 0533421]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10830. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4343. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 75.

2212. — German, 1499 [13 May].

[GART] Herbarius zu teütsche/ vnnd von allerhandt kreüterten. ... Augsburg, Johann Schönsperger, 13 May 1499.

2°: 262ℓ. Two columns, Gothic letter, 39 lines, with large woodcut on the title (apothecary and physician in a chemist's shop), two full-page woodcuts (1: magister sitting on an elaborate arm chair and four pupils; 2: three savants, sitting in a pharmacy, attended by two others, behind them an apprentice), hundreds of text woodcuts of plants, animals, etc.

VERY RARE. This edition of which only a few examples are known shows the same make-up of text (except the first five leaves) as Schönsperger's 1496 edition. The title page woodcut and the full-page woodcut first occur in Brunschwig's *Chirurgia*, Strassburg, Grüninger, 1497. After the title are four leaves being a table of German plants of names.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 60-1, no. 13. • Goff: G-107. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8956. • Klebs, *Incunabula Scientifica*, 1938: no. 507.13. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 48, no. 15. • Klebs, *Catalogue of Early Herbals*, 1925: no. 32. • Nissen (BBI): no. 2275. • NUC: 255, 431-4 [NH 0533423]. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4344. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 76.

2213. — German, 1502.

[GART] Herbarius zu teütsche/ vnnd von allerhandt kreüterten. ... Augsburg, Hanns Schönsperger, 1502.

2°: 258?ℓ. COLOPHON (J7v): Gedruckt vnd seligklich volendet diser Herbarius durch Hannsen Schoensperger. In der Keiserlichen Satt [!] Augspurg. An sant Clementen tag des Heyligen Pabsts. Nach Cristi vnnsers Herren geburt Funfftzehenhundert vun zwey iar. Gott sey lob. VERY SCARCE.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: no. 13 [Anmerkung]. • Nissen (BBI): no. 2276. • NUC: 255, 431-4 [NH 0533424]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 11893.

2214. — German, 1507-9.

[GART] [Part I:] In disem Büch ist der Herbar: oder kreüterbuch, genant der gart der gesuntheit, mit merern figuresn vnd registern ... [Strassburg, Johann Prüss, 1507].

[SECOND PART:]

[Part II: Hortus Sanitatis translated into German] In diesem Büch ist der Gart der gesuntheit (zu latin Ortus sanitatis) in vier theyl getheylet. Mit seinen register der artznyen ... [Strassburg, Johann Prüss, 1509].

HERBALS: GART DER GESUNDHEIT

2 parts in one volume. [Part 1: 1507] 2°: a-z⁶ A-H⁶ Aa-Dd⁶ (Dd6 blank); 204ℓ.; [6], clxxxii, [17]ℓ., errors in foliation. Gothic letter, 5 nearly full-page woodcuts (1, on the title: apothecary with physician; 2/3, patient in bed and three attending physicians (repeated); 3: human skeleton; 4: chemist cooking, and physician with vessel), and many smaller text cuts of plants and genre pictures. [Part 2: 1509] 2°: a-o⁶ A-O⁶ (O6 blank); 174ℓ.; no pagination or foliation. Two columns, Gothic letter, with three large woodcuts (1/2: patient in bed and three attending physicians (repeated); 3: human skeleton), over 500 smaller text cuts of animals, fishes, birds and precious stones. Four of these smaller cuts are on the title page.

VERY RARE. A compilation of the German *Gart* with parts of the Latin *Hortus Sanitatis* translated into German. The first part is a reprint of the German *Gart der Gesundheit*. The second part is the first German translation of the Latin *Hortus Sanitatis*, comprising the four sections dealing with animals, fishes, birds and precious stones. The portion on the plants is not translated as that material is covered in the first part. The greater part of the smaller woodcuts are derived from Prüss' fifteenth century editions.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 66-7, no. 21. • Klebs, *Catalogue of Early Herbals*, 1925: no. 33. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: nos. 61 & 64. • Nissen (BB1): no. 2282. • NUC: 255, 431-4 [NH 0533425]. • Pritzel, *Thesaurus Literaturae Botanicae*, 1871-3: no. 10831. • Schreiber, *Kräuterbücher*, 1924: xxviii.

2215. — German, 1508.

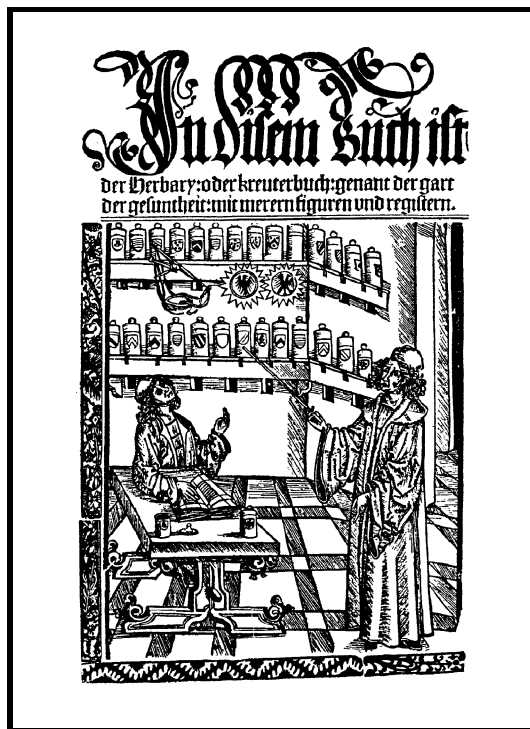
[GART] *Herbarius zu teütsche vnd von allerhand kreüter ...* Augsburg, Hans Otmar für Johann Reynmann, 1508.

2°: 240 leaves (the last blank). Gothic letter, with large woodcut on the title page (apothecary and physician in a chemist's shop), two full-page woodcuts (magister and four pupils; three savants in a pharmacy, attended by two others, behind them an apprentice), very many woodcuts of plants, animals, precious stones in the text. Initial letter at the beginning.

VERY RARE. Only a few copies of this edition are known. It is printed by Hanns Otmar [see note below] and is a reprint of the preceding editions of Schönsperger, 1496 and 1499, with only the orthography showing variations. Otmar has used the same page make-up and the same woodcuts and types as Schönsperger. However, by introducing broader columns, he reduces the contents to 239 leaves. A curious woodcut at the end shows Christ (or Godfather?) with the holy lamb, and the convocation of the Last Judgement. (Klebs/Becher)

Hanns Otmar. (BORN: Reutlingen, Germany, ; DIED: Augsburg, Germany?,) *German printer*. Between 1479 and 1501, Otmar printed many books at Reutlingen and Tübingen, but in 1501 reestablished himself in Augsburg, where he published his first title from this, his third press, in 1502.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 67, no. 22. • Klebs, *Catalogue of Early Herbals*, 1925: no. 34. • Nissen (BB1): no. 2277. (Otmar) Klebs, *Catalogue of Early Herbals*, 1925: no. 34.



HERBARY: ODER KREUTERBUCH, 1515

2216. — German, 1515.

[GART] In disem büch ist | der Herbary: oder kreuterbuch: genant der gart | der gesuntheit: mit merern figuren vnd registern. | [Woodcut showing two figures inside an apothecary shop].

2°: a-z⁶ A-E⁶ Aa² Bb⁸ Cc⁶; 184ℓ.; [6]ℓ., leaves I-CLX, [1] leaf (skelton), 17ℓ (index), 5 large woodcuts (1: Apothecary's shop with two figures; 2/3: patient in bed, with three physicans (repeated); 4: full-page skeleton; 5: chemist cooking and a physician with vessel), and 436 text woodcuts of plants, animals, precious stones and minerals. Printer's mark on the last leaf. Colophon: "Getruckt ... durch Renatum Beck / Büchtrucker züm Thierfasten. In dem Jar da man zalt nach der geburt Christi/Tusent/fünff-hundert vnd.xv."

VERY SCARCE. This is the first edition of *Gart der Gesundheit* to be printed by Renatus Beck [see note below]. In appearance it mimics the incunabula editions (an almost exact copy of Prüss 1507 edition), using to a large extent the old woodcuts, with only a few new ones to replace lost wood blocks.

Renatus Beck. (BORN: köln, Germany, ; DIED: Strasbourg, Alsace, France, 1521/2) *German printer*. Beck became a citizen of Strasbourg in 1511. He established his press there as well.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 67-8, no. 23 [wrong collation]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 35. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 568. • Nissen (BB1): no. 2283. • NUC: 255, 431-4 [NH 0533426]. • Plesch, *Stiftung für Botanik Auction*, 1975-6: no. 366. • Pritzel, *Thesaurus Lit-*

HERBALS: GART DER GESUNDHEIT

eraturæ Botanicae, 1871-3: no. 10831. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 81a. (Beck) ADB. • Benzing, *Buchdrucker des 16 und 17 Jahrhunderts*, 1982: p. 440. • DBA: I 70, 51. • Ritter, F., "?? Reinhart and Balthasar Beck ??," *Gutenberg-Jahrbuch*, 26 (1951), 101-9. • WBI.

2217. — German, 1521.

[GART] In disem Büch ist | der Herbari: oder kreuterbüch: ge | nant der gart der sesuntheit: mit me | reren Figuren und Registeren. | [woodcut].

2°: a-z⁸ A-D⁶ E-F⁸ G⁶; 184l.; [6], CLX, [18]l. Two columns, Gothic letter, with 4 large woodcuts (1. Full-page woodcut of skeleton on E5r; 2. large woodcut of apprentice stirring a cauldron and a physician standing by a flask on E5v; 3. Small woodcut of the Annunciation on E6v; 4. Small cut of physician at desk with flask and woman with hamper on E7r; 5. Full-page woodcut of the Saints Cosmos and Damien on F1r; 6. Large woodcut of man in bed attended by 3 physicians on F1v), and over 400 text cuts of plants, animals, etc. COLOPHON (G6r): "Getruckt vnd flyssiglichen volendet durch Rena | tum Beck. In dem Jor do man zalt nach | der geburt Christi, Tusent, fünff hundert vnd. xxi."

VERY RARE. Second edition printed by Renatus Beck. The woodcuts are in most cases identical to the 1515 issue. Two woodcuts of plants appear on the title page.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 68, no. 24. • Hunt Botanical Catalog: no. 21. • Klebs, *Catalogue of Early Herbals*, 1925: no. 36. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 571 [not seen]. • Nissen (BBI): no. 2285. • NUC: 255, 431-4 [NH 0533428]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10831.

2218. — German, 1527.

[GART] Herbarius. Kreüter buch von neuwem mit höchstem fleiß durchsucht und gebessert. sampt drey neuwen Registern. Getruckt zu Straszburg am Holtzmarckt, durch Balthassar Beck. Nach dem jar der geburt Christi des herren. M.D.XXVij.

2°: Aa-Cc⁶ a-z⁶ A-E⁶; 185l.; [18], 162, [5]l. Two columns, Gothic type.

VERY SCARCE. Balthasar Beck's [see note below] first printing of *Der Gart*.

Balthasar Beck. (BORN: Kirchheim an der Teck, Germany, ; DIED: Strasbourg, Alsace, France, 1551) *German printer*.

[
BIOGRAPHY NEEDED
]

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 68-9, no. 25. • Nissen (BBI): no. 2286. (Beck) Benzing, *Buchdrucker des 16 und 17 Jahrhunderts*, 1982. • DBA: II 84, 204. • NDB. • Ritter, F., "?? Reinhart and Balthasar Beck ??," *Gutenberg-Jahrbuch*, 26 (1951), 101-9. • WBI.

2219. — German, 1528.

[GART] Kreüterbuch oder Herbarius ... Strassburg, Balthasar Beck, 1528.

2°: 186l. Gothic letter. Fine historiated woodcut border around the title (on the sides figures representing Galienus and Aesculapius) and 380 text woodcuts of plants, animals, etc.

RARE. Second German edition of the Gart printed by Balthasar Beck. With the exception of the title border, nearly all the woodcuts are derived from the preceding editions of Renatus Beck.

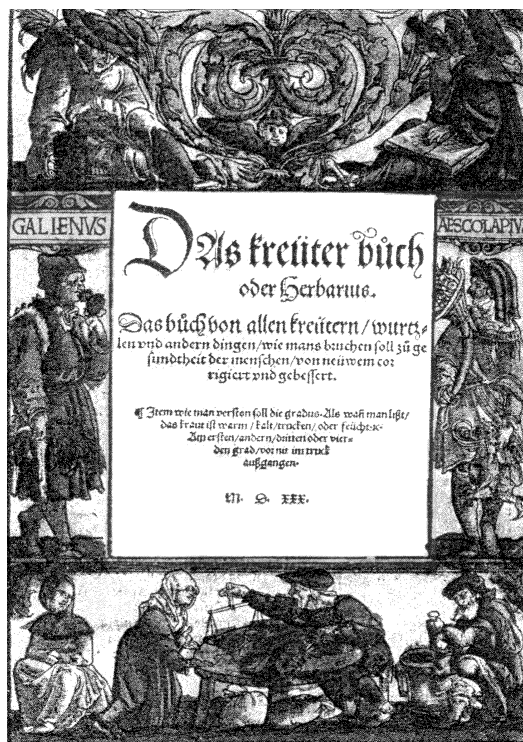
REFERENCES: Klebs, *Catalogue of Early Herbals*, 1925: no. 37. • Nissen (BBI): no. 2287. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10831.

2220. — German, 1529.

[GART] Gart der Gesundheit. Zu Latin Ortus sanitatis. Von allerley Thieren, Voglen, Vischen oder Morwundern, und edlem Gstein ... mit höchstem Fleissz durch sucht, corrigiert, und gebessert. Item ein neuw Register ... [Strassburg, Balthassar Beck, 1529].

2°: 144l.; no pagination or foliation. Two columns, Gothic type, 46 lines. 398 woodcuts. VERY RARE.

REFERENCES: NUC: 255, 431-4 [NH 0533430].



DAS KREÜTER BÜCH, 1530

2221. — German, 1530.

[GART] [Within an elaborate woodcut border:] Das kreüter büch | oder Herbarius. | Das büch von allen kreütern/ wurcz= | len vnd andern dingen/ wie mans bruchen soll zû ge | sundtheit der menschen/ von neuwem cor | rigiert vnd gebessert. | ¶ Item wie man versten soll die gradus. Als wah man ltßt/ | das kraut ist warm/ kalt/ trocken/ oder feüchter.

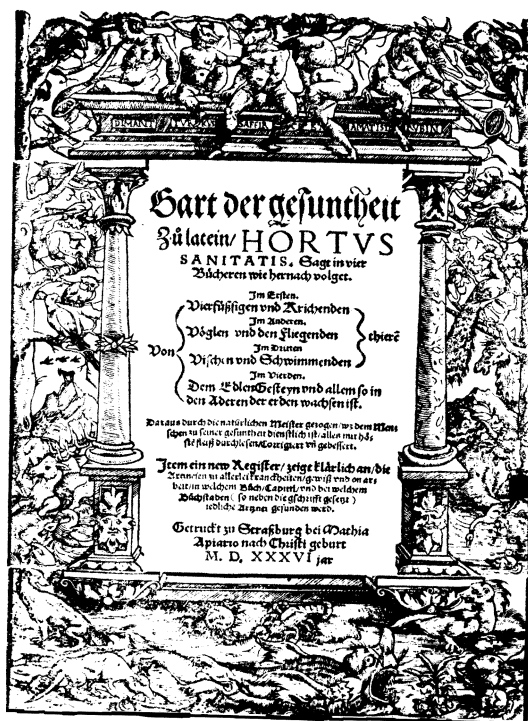
HERBALS: GART DER GESUNDHEIT

| Am ersten/ andern dritten oder vier= | den grad/
vor mit im truck | außgangen. | M. D. XXX.

2°: 186ℓ.; [18], 162, [4]ℓ. Gothic letter. Title surrounded by a fine woodcut border, and about 380 text woodcuts of plants, animals, etc.

VERY SCARCE. Third edition printed by Balthasar Beck. The title border and woodcuts are identical to B. Beck's previous editions.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 68-9, no. 25n. • Klebs, *Catalogue of Early Herbals*, 1925: no. 38. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 575. • Nissen (BBI): no. 2288.



GART DER GESUNDHEIT, 1536

2222. — German, 1536.

[GART] [Within a woodcut frame composed of plants, birds, animals and demons:] Gart der gesuntheit | Zů latein/ Hortvs | Sanitatis. Sagt in vier | büchern wie hernach volget. | Im Ersten. | [The next 8 lines braced with the word "Von" to the left (the top 4 lines braced on the right with "thiere": Vierfüßigen vnd Krichenden [thiere]. | In Anderen. | Vöglen vnd den Fliegenden [thiere]. | Im Dritten. | Vischen vnd Schwimmenden [thiere]. | Im Vierden. | Dem Ddlen Gesteyn vnd allem so in | den Aderen [!] der erden wachsen ist. | Daraus durch die natürlichen Meister gezogen/ w3 dem Men= | schen zu seiner gesuntheit dienstlich ist/ alles mit hō= | stē fleiß durchlesen/ Corrigiert vñ gebessert. | Item ein new

Register/ zeigt Klärlich an/ die | Artznesen zu allerlei krankheiten/ gewiß vnd on ar= | beit/ in welchem Büch/ Captitti/ vnd bei welchem | Büchstaben (so neben die gschrift [!] gesetzt) | iedliche Artznei gefunden werd. | Getruckt zu Straßburg bei Mathia | Apiario nach Christi geburt | M. D. XXXVI jar.

4°: [6], CXLIIIℓ. Title in red and black with ornamental border. RARE.

REFERENCES: Nissen (BBI): no. 2371. • NUC: 255, 431-4 [NH 0533433].

Low German Dialect editions

2223. — German, 1492 [Low German Dialect].

[GART] Gaerde der suntheit ... Lübeck, Steffen Arndes, 1492.

2°: 324 leaves, 41 lines, with a full page woodcut on leaf 305 (a physician holding a urine flask against the sun, to the right a male cripple with hamper), and 519 text woodcuts of plants, animals, precious stones, etc. Woodcut initial letters.

VERY RARE. Printed by Steffen Arndes [see note below], this is a remarkable herbal for several reasons: it is among the earliest and most extensive of books to be printed in the Low German dialect, it possesses splendid initial letters in ornamental Gothic style, and it blends the texts from Schoeffer's *Der Gart* and Meydenbach's *Hortus Sanitatis*.

About two-thirds of the work is drawn from *Der Gart*, and the remainder from the *Hortus Sanitatis*. It is a Low German version of Schoeffer's original text, greatly augmented by translations added from the Latin *Hortus*. The "van den edelen stenen" (de lapidibus), with 146 chapters has been adapted from Meydenbach's *Hortus* and 107 new chapters on vegetable and animal subjects have been added to the main part, making a total of 688 chapters (except the tract on uroscopy). Thus, this is the edition with the greatest number of plant descriptions. However, the order of the text and the placement of the images differ considerably from both of its sources. There are numerous duplications of individual chapters, and frequent use of uncommon or exotic synonyms to conceal the padding, a fairly common practice at the time. In general its illustrations are of a high caliber, sometimes improving upon the originals, yet not quite equal to Schreiber's claim that they "surpass by far all the High German editions." 370 of the text cuts are exact copies of Schoeffer's illustrations, while other illustrations are derived from Meydenbach's *Hortus*.

Klebs/Becher: "The translation of the whole work including that of the Latin tract on precious stones, is very exact, sometimes two Low German names are added to the Latin names of herbs; the aspect of the compilation is very harmonious, indeed."

Steffen Arndes. (BORN: Mayence, Germany, ; DIED: Lübeck, Germany, 1519) *German printer*. Arndes was the greatest of the Low German printers, having published in 1494 the famous Lübeck bible. He began his printing

activities in Perugia, then afterwards at Schleswig and finally in 1487 he established himself in Lübeck. He was succeeded by his son, Hanns.

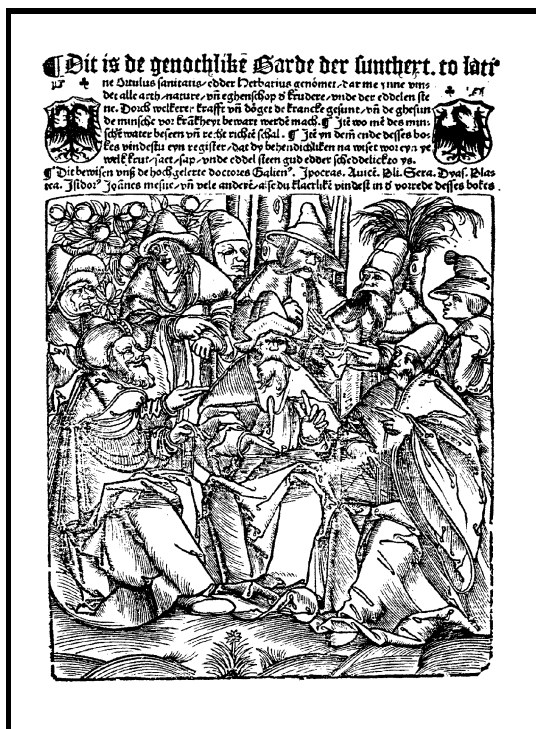
REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 70-1, no. 29. • Goff: G-109. • Hain, *Repertorium Bibliographicum*, 1826-38: HR 8957. • Kinderling, *Geschichte der niedersächsischen Sprache*, 1887: p. 356. • Klebs, *Incunabula Scientifica*, 1938: no. 507.10. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 46-7, no. 11. • Klebs, *Catalogue of Early Herbals*, 1925: no. 39 [wrong leave count]. • NUC: 255, 431-4 [NH 0533439]. • Oates, *Cambridge 15th Century Books*, 1954: no. 1192. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10832. • Scheller, K.F.A., *Bücherkunde der sassisch-niederdeutschen Sprache*, hauptsächlich nach den Schriftdenkmälern der Herzogl. Bibliothek zu Wolfenbüttel. Braunschweig, Gedruckt im Fürstl. Waisenhaus, 1826. [i]-xvi, [1]-528 p: p. 99, no. 453. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 11, p. 12, nos. 224-744. • Schreiber, *Kräuterbücher*, 1924: xxv-xxvi. • Schreiber, *Manuel de la Gravure*, 1893-1911: no. 4345. • Sudhoff, *Deutsche Medizinische Inkunabeln*, 1908: no. 81 [wrong leave count]. (Arndes) BMC XV. • Voulliéme, *Deutsche Drucker*, 1922: 95-6.

ende desses bo= | kes vindestu eyn register/ dat dy behendich'liken na wtset wor eyn ye | welt krut/ saet/ sap/ vnde eddel steen gud edder scheddelick so ys. | ¶Dit bewiser vnß de hoch gelerte doctores salien°. Ipocara. Auicē. Pli. Sera. Dyas. Bla= | tea. Isidor° Ioānes mesne/ vn vele anderē/ also du Klaerlikē vin dest in d' vorrede desses bokes. | [Large woodcut showing central savant surrounded by eight disciples].

2°: a⁶ b⁸ c-e⁶ f-g⁴ h-i⁶ k⁵ l-q⁶ r⁴ s-t⁶ v⁶ x-z⁶ 1⁶ cō⁶ aa-gg⁶ hh⁵ ii⁶ kk-rr⁶ [OldR,OldR]⁴ [OldS,OldS]⁶ ss-tt⁶ vv⁴ xx⁴ yy-zz⁶ A-B⁶ C⁴ D-E⁶ F⁴; 322l.; large woodcut on title and 492 text woodcuts.

RARE. Printed in the Low German dialect in Lübeck by Steffen Arndes in 1520. Reprint of the 1492 edition?

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 71-2, no. 31. • NUC: 255, 431-4 [NH 0533427].



GARDE DER SUNTHEYT, 1520

2224. — German, 1520 [Low German Dialect].

[GART] ¶Dit is de genochlikē Garde der suntheyt. to lati- | ne Ortulus sanitatis/ edder Herbarius genōmer/ dar me inne vn= | det alle arth/ nature/ vn eghenschoep d' krudere/ vnde der eddelen ste | ne. Dorch weikerer Krafft vn dōget de Krancke gesunt/ vn de ghesun | de minsche vor Kraākheyt bewart werdē mach. ¶Itē wo mē des min= | schē water besen vn recht richtē schal. ¶Itē vn dem



DĒ GROTE HERBARI, 1514

Dutch editions

2225. — Dutch, 1514.

[GART] Dē grotē herbari° | met al sijn figuerē | Die Ortus sanitatis ghenemst is.met sijnder tafe | le in Latijn en in Duytsche En hier aseem soon registre om die curatien teghen alti= | lz ande crancheden lichtelijch te vindene En oec een expert sunerlic tractaet om vpe | iorine reindirerene En noch

HERBALS: GART DER GESUNDHEIT

een tractaet om die trachten van alle mederinen te hen | nene/ met vele andere goede leeringhen. [ornaments] | [Four small woodcuts arranged in a square with woodcut pieces on either side forming a border].

2°: [6], CXC (i.e., CLXXXV), [19]ℓ. Gothic letter. Four small woodcuts on the title page arranged in a square within two vertical borders. One full-page woodcut (human skeleton after Grüninger's cut) and over 400 text woodcuts (several repeated) of plants, animals, genre pictures. Initial letters.

SCARCE. Third edition of the Dutch translation of the *Gart*; the first printed by Claes de Grave. Many of the woodcuts are copied and reduced from the Latin *Hortus Santatis*, especially Prüss' edition. The cuts of the genre pictures are somewhat finer in detail than their models. (Klebs/Becher) The Dutch version contains an additional treatise *Cautelen* attributed to Arnaud de Villeneuve.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 73, no. 33. • Klebs, *Catalogue of Early Herbals*, 1925: no. 40. • Nijhoff & Kronenberg, *Nederlandsche Bibliographie*: no. 1051. • Nissen (BBI): no. 2289. • NUC: 255, 431-4 [NH 0533434]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10834.

2226. — Dutch, 1526.

[GART] Dē grotē herbari⁹ | met al sijn figuerē | Die Ortus sanitatis genaemt is. om die crachten vā alle cruyden te | wetenē metter tafelen in latijn ende in duysche. | ¶ Noch een Register om die uracien teghen alderhande cranche- | den lichtelijcte vindene | ¶ Noch een expert tractaet. om alle orijnen te iudicerene | ¶ Noch een tractaet van den cautelen der orijnen der orijnen van meester Arnol | dus de villa noua. op dat eē medecijn meester niet bedrogē en worde | ¶ Noch een tractaet om die operaciē van alle droogherijen en mede | cinen te kennene. Metter Anothomie der menselijcker ghebeentē. | Ende met andere ontellijcke nootsakelijcke leeringhe. | ¶ Wedere verdruct ende ghecorrigeert ✕ Lof ✕ God ✕ Van ✕ Al ✕ | [two woodcuts, side-by-side and a vertical border at the right].

2°: ✕⁴ a-y⁶.⁴ z⁶ ʒ⁴ ʔ⁶ A-H⁴.⁶ I⁴ K⁴ L⁶ M⁴; 188ℓ.; [4], i-Clxij, [21]ℓ. Two columns, Gothic letter. Two small woodcuts on the title page (one representing a physician with urine flask and a woman the other a plant). Full-page woodcut of a human skeleton, and over 400 text woodcuts of plants, animals, etc. COLOPHON (M4r): ¶ Desen boeck is geprint in die vermeer | de ccoopstadt [!] van antwerpē bi mi Claes | die Graue In onser lieuer vrouwē pant | Bi die Camerpoorte Int iaer ons herē | M.CCCCC. ende xxvi Den xviii. daciz | van Iunio | [woodcut].

EXTREMELY RARE. Second edition printed in Antwerp by Claes de Grave. The same woodcuts as the preceding edition. According to the Hunt catalog,

only four copies of this edition are known.

The first woodcut on the title page shows a man holding a flask, and a woman with a hamper. This cut is repeated on Iir and below the colophon. The second woodcut on the title is of a plant. A full-page woodcut of a skeleton appears on H3v. Throughout the text are small woodcuts of plants, animals, stones and genre scenes.

REFERENCES: Hunt Botanical Catalog: no. 24. • Klebs, *Catalogue of Early Herbals*, 1925: no. 41. • Nijhoff & Kronenberg, *Nederlandsche Bibliographie*: no. 1052. • Nissen (BBI): no. 2290.

2227. — Dutch, 1532.

[GART] Den groten | herbarius | met alden figueren der cruyden ... [Utrecht?]: Jan van Doesborch, 1532.

2°: ✕⁴ a-z⁴ ʒ⁴ ʔ⁴ A-H⁴; 196ℓ.; no pagination or foliation. VERY SCARCE.

REFERENCES: Nissen (BBI): no. 2292. • NUC: 255, 431-4 [NH 0533436].

2228. — Dutch, 1533.

[GART] Den groten herbarius met al sijn figueren der cruyden, om die crachten der cruyden te onderkennen ... Noch eenen experten tractaet om all urinen te iudiceren. Noch eenen tractaet vanden cautelen der urinen van meester Arnoldus de Villa nova ... Noch eenen tractaet om die operacien van alle droogherien ende medicijnen te kennen. Met dye anathomie vanden ghebeente vanden mensche. Moch eenen experten tractaet voer personen die op dorpen ende casteelen ... om te maken wondrancken, salven, ende olien ... Item noch eenen ... tractaet van die spaensche pocken [ghescreven door ... Wendelin Hock] ... [Thantwerpen, Claes de Grave] 1533.

4°: [4], clxiii, [31]ℓ. Gothic letter. Title in red and black with a woodcut at the bottom representing a "Garden of Health." Full-page woodcut of a human skeleton and over 400 text woodcuts of plants, animals, etc.

SCARCE. Third edition by Claes de Grave, to which is added another treatise, "Den Antidotarius voor Barbiers ende ander, om te maken Saluen, Olien, Plaesteren, Poederen, Slaepdrancken ende Wondrancken." This text starts at leaf M4 and ends on O6. Otherwise, except for the title, the work is an almost exact reprint of the preceding editions.

REFERENCES: Klebs, *Catalogue of Early Herbals*, 1925: no. 42. • Nijhoff & Kronenberg, *Nederlandsche Bibliographie*: no. 1053. • Nissen (BBI): no. 2291. • NUC: 255, 431-4 [NH 0533437].

2229. — Dutch, 1538.

[GART] Den groten herbarius ... Utrecht, Jan Bernts, 1538.

2°: 186ℓ. Gothic letter. Title in red and black with one large and two small woodcuts, full-page woodcut with printer's device on the last leaf, full-page

cut of a human skeleton, and over 450 text woodcuts of plants, animals, etc.

VERY RARE. The only herbal edition printed by Jan Bernts, and especially interesting for the numerous splendid illustrations. The title woodcut and the cuts of the plants are mostly printed from blocks used formerly in the *Grete Herball* (London, 1526). This interesting fact explains why the 1539 edition of the *Grete Herball* was published without illustrations, the old block having been secured by Brent for this Utrecht edition. Besides the cuts of plants, etc. that are printed here with nice borders along the vertical sides, this edition contains a large number of new illustrations, executed by artists of merit.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 73, no. 35 [not seen]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 43. • Nijhoff & Kronenberg, *Nederlandsche Bibliographie*: no. 1054. • Nissen (BBI): no. 2293. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10761.

2230. — Dutch, 1547.

[GART] Den groten herbarius met al sijen figuren ... Antwerpen, Symon Cock, 1547.

2°: 178ℓ. Gothic letter. Title woodcut, a full-page woodcut of a human skeleton and over 400 text woodcuts of plants, animals, etc.

SCARCE. This edition uses the same woodcut border and almost the same text illustrations as the 1533 edition of Claes de Grave. Likewise it contains the "Den Anthidotarius voor Barbiers."; however, a new treatise on arboriculutre is newly appended.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 73, no. 36 [not seen]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 44. • Nissen (BBI): no. 2294. • NUC: 255, 431-4 [NH 0533438].

Hortus Sanitatis

2231. — Latin, 1491 [First edition].

[HORTUS] Ortus Sanitatis. [Mainz, Jacob Meydenbach, 23 June 1491].

2°: A-B⁸ C-Z^{6/8} a-l^{6/8} 2m⁸ n-z^{6/8} 18 aa-hh^{6/8} ii-ll⁶ 18 2v⁶ 2A⁸ 2B-2E⁶ (\$4 or \$3 signed; 2E6 blank); 454ℓ.; no pagination or foliation. Two columns, 48 lines, capial spaces with guide letters, except in the *Tractatus de herbis*. Each treatise begins with a full-page woodcut illustration. Otherwise, the text contains 1,066 woodcuts of plants (530), animals (164), birds (122), water animals (106), and precious stones (144), including many genre pictures. PAGE SIZE: 293 x 198 mm.

CONTENTS: A1r (=1r), Title.; A1v (=1v), Full-page woodcut, showing a group of nine figures, surmounted by an arch, with two small, blank shields in the corners.; A2r (=2r), "Incipit prohemium presentis operis ..."; A2v-m8r (=2v-248r), "Tractatus De herbis."; n1r (=249r), Sectional title page, "Tractatus de Animalibus | vitam in terris ducentium."; n1v, Full-page woodcut, 3 men, capped and robed, with animals in the foreground.; n2r-t8v (=250r-298v), Text of animals.; v1r (=299r), Sectional title page, "Tractatus De auibus."; v1v (=299v), Full-page woodcut, 2 men, capped and robed, seated in a courtyard, surrounded by various birds.; v2r-t8r (=300r-334r), Text of birds.; t8v (=334v), Full-page woodcut of 2 men capped and robed, standing at a harbor with fish and

mermaid in the water.; aa1r-ee2r (=335r-364r), "Tractatus De piscibus."; ee2v (=365v), Woodcut showing a jewelry shop with various stones being offered for sale.; ee3r-ll6v (=365r-408v), "Tractatus De lapidibus."; 1r (=409r), Sectional title page, "Tractatus De Vrinis."; 1v (=409v), Woodcut showing an apothecary's shop.; 2r-2v6v (=410r-422r), Text of urine tract.; 2A1r-2D5r (=423r-447r), "Tabula."; 2D5v-2E5v (=447v-453v), "Tabula generalis."; 2E5v (=453v), COLOPHON: ... Quem quidem librum omni dilige[n]tia collectum [et] elaboratum, intelligibili caractere proprijs impensis Iacobus meydenbach cuius Moguntinus lucule[n]tissime impressit ... Impressum est autem hoc ip[su]m in inclita ciuitate Moguntina ... in qua nobilissima ciuitate [et] ars ac scientia hec subtilissima characterisandi seu imprimendi fuit primu[m] inuenta ... Anno salutis Millesimo Quadringentesimo Nonagesimo primo, Die vero Iouis vicesima tertia mensis Iunij.; 2E6, Blank.

EDITIO PRINCEPS. Extremely rare. Printed by Jacob Meydenbach [see note below] as his first book, the *Hortus Sanitatis*, completed June 23, 1491, provided a most glorious sunset for the incunabula herbal, outdoing all previous works of its time in the scope of its concept and setting the standard for the future. It contained 1,066 chapters, each with its own woodcut depiction, placing it among the most extensively illustrated books of its time, and one of the finest illustrated works of this early period. It is a descendent of the *Herbarius* and *Der Gart* in both its text and illustrations but it is also a wholly independent work.

The text is divided into the following sections: (1) Prohemium, being a translation of the preface to *Der Gart*, (2) *Tractatus de Herbis* consisting of 530 chapters describing medicaments of plant origin, (3) a treatise on land animals in 164 chapters, (4) a treatise on birds in 122 chapters, (5) a treatise on fishes in 106 chapters, (6) a treatise on stones and minerals in 144 chapters, and (7) a treatise on urines. Following are a long therapeutical index of diseases referred to in each division of the book, and an alphabetical index to each part. It concludes with an epilogue by the printer, in which he claims credit for producing this book and for the city of Mainz the credit of the invention of printing. In essence this volume was a medieval natural history, but one that mingled medicine with folklore, and from its pages can be reconstructed both the state of knowledge and the spirit of its age.

Since it was published in 1491, this was the last large European work of natural history to predate the discovery of the New World, thus it provides a clear historical time capsule. In some measure the text obscures its wealth of detail by retaining the contractions used by scribes of the manuscript era in its typography. Moreover, there are frequent examples of padding by the book's compiler, who hides his duplications under rare and unusual synonyms drawn from Greek and Arabic sources. That practice creates still further problems in that there are misspellings, as well as mistranscribed manuscript material, sometimes beyond any clarification. But despite its flaws the *Hortus Sanitatis* contains a record of unique value, and a charm that has not dimmed in over 500 years.

The 7 full page woodcuts are: (1) three sitting

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savants and six attendants, (2) three savants and eight different animals, (3) two men and several birds, (4) two men and fishes, (5) jeweller's shop with 12 persons, (6) apothecary's shop with nine persons, (7) two physicians and six patients. These as well as the hundreds of text cuts were executed in the manner of the Master of the Ulm Aesop, another illustrated work of the period.

Jacob Meydenbach. (BORN: c1444; DIED: Mainz, Germany?, after 1495) *German printer.* Jacob Meydenbach is assumed to be the son of one Johann Meydenbach who is recorded by Sebastian Münster to have moved with Gutenberg from Strasbourg to Mainz and formed a partnership with the later and Fust. Four items, dated 1491, 1492 and 1495 are known to be from Jacob Meydenbach's press, as well as four undated items, including an edition of *Der Totentanz* (=Dance of Death).

REFERENCES: Arber, *Herbals, their Origin and Evolution*, 1986: 28-37. • BMC XV: 1, 44 [IB 343]. • Brunet: 3, 342. • Choulant, *Graphische Incunabeln*, 1858: p. 61-2, no. 14. • Cleveland *Herbal & Botanical Collections*, 1992: no. 16. • Freilich *Sale Catalog*: no. 254. • Fuchs, R.W., "Die Mainzer Frühdruk mit Buchholzschnitten," *Boersenblatt*, 14 (1958), 1224-33: [Suggests that the botanical portion was written by D. Peter von Viersen, director of the medical faculty of the University of Mainz.]. • Goff: H-486. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8944*. • Hoover Collection: no. 432. • Hunt Botanical Catalog: no. 8. • IGI: no. 4900. • Klebs, *Incunabula Scientifica*, 1938: no. 509.1. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 49, no. 1. • Klebs, *Catalogue of Early Herbals*, 1925: no. 45. • Meier, C., "Der 'Hortus Sanitatis' als enzyklopädisches Buch" (pp. 191-200), in: Höfinghoff, H., et al. [eds], *Alles was Recht war. Rechtsliteratur und literarisches Recht.* Festschrift für Ruth Schmidt-Wiegand. Essen 1996. • Nissen (BBI): no. 2362. • Nissen, *Herbals of Five Centuries*, 1958: 59. • NUC: 255, 431-4 [NH 0533365]. • Oates, *Cambridge 15th Century Books*, 1954: no. 55. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 105-15. • Polain, *Catalogue*, 1932: no. 2003. • Pollard, *Catalogue of Hawkins Books*, 1910: 11. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10817. • Proctor, *Index*, 1898-1906: no. 160. • Schramm, *Bilderschmuck der Frühdruk*, 1922-36: 15, p. 7. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4247. (Meydenbach) Baer, L., "Der Heidelberger Totentanz und die mittelhochdeutsche Buchillustration des 15. Jahrhunderts," in: *Gutenberg Festschrift*, Mainz, 1925, p. 269. • BMC XV. • DBA: I 834, 43. • Nagler, *Neues allgemeines Künstler-Lexikon*, 1835-52. • Nissen, *Herbals of Five Centuries*, 1958: 59. • Schaab, *Geschichte der Erfindung der Buchdruckerkunst*, 1830: 1, 539. • WBI.

2232. — Latin, 1497 [not after 21 October].

[HORTUS] Ortus Sanitatis | De herbis et plantis. | De Animalibus ⁊ reptilibus | De Avibus et volatilibus | De Piscibus ⁊ natatilibus (tibus | De Lapidibus ⁊ in terre venis nascē | De Urinis et earū speciebus | Tabula medicinalis Cum directo= | rio generali per omnes tractatus.

2^o: a⁸ b-k⁶ l⁸ m-r⁶ s⁸ t-z⁶ Aa⁶ Bb⁸ Cc-Ee⁶ Ff⁸ Gg-Ii⁶ A⁸ B-C⁶ D⁸ E-H⁶ I⁸ K-Q⁶ R⁸ S-T⁶ V⁸ aa⁶ bb⁴ cc-ee⁶ (Q1 signed V); 360ℓ.; no pagination or foliation. Two columns, 54-55 lines, gothic letter, capitals with printed guide letters and paragraph marks in red and blue throughout. PAGE SIZE: 295 x 205 mm.

CONTENTS: alr (=1r), Title.; alv (=1v), Woodcut of lecturer and four pupils.; a2r-li6v (2r-202v), Text of the Tractatus de Herbis.; Alr (=203r), Sectional title page of the Tractatus de Animalibus.; Alv (=203v), Woodcut, inscribed: Homo natus de muliere breui viuens tempore.;

A2r-V8v (=204r-332v), Text of the De Animalibus, De Avibus, De Piscibus and De Lapidibus.; aa1r (=333r), Sectional title page of the Tractatus de Vrinis.; aa1v (=333v), Woodcut of an exposition at an apothecary's.; aa2r-bb4v (=334r-342v), Text of the De Vrinis.; cc1r-ee6r (=343r-360r), Tables.; ee6v (=360v), Blank.

RARE. This is the first of Prüss' [see note below] reprints of Meydenbach's *Hortus*. By increasing the number of lines in each column and going to a smaller type Prüss reduced the size of the book from 454 to 360 leaves. It is apparently this edition, rather than Meydenbach's original that seems to be the model for the subsequent Latin editions and translations into other languages. The "Tractatus de animalibus" and "Tractatus de urinis" have divisional title-pages with full-page woodcuts on verso; these woodcuts also appear in Gruninger's edition of Hieronymus Brunschwig's *Cirurgia* (Strasbourg, 4 July 1497). Illustrated with 3 full-page and 1,061 smaller woodcuts in text, modelled after those in the first ed. (Mainz, J. Meydenbach, 23 June 1491).

Prüss was the publisher who really profited from the Latin Hortus (Meydenbach never issued subsequent editions). He produced his editions with economy of paper by printing in a small type in 55 lines. Instead of the seven full-page woodcuts used in Meydenbach's edition, Prüss only includes three, the first and third taken from Brunschwig's *Cirurgia*, the second (the human skeleton) from Brunschwig's *Anatomia*. He also copies the textcuts from Meydenbach, but some of them are repeated, as if similar figures were involved. Of the new cuts, "The most interesting of the genre pictures (especially those to the parts of zoology and mineralogy), for the draughtsman worked on these more individually with regard to the costumes, which represent those in use in Alsace at that time." (Klebs/Becher).

There are three full page woodcuts: (1) magister sitting at his desk, with students, (2) human skeleton, (3) apothecary sitting in his shop and physician. The depiction of the skeleton appears here for the first time in an edition of the herbals. It was used repeatedly in almost all the subsequent herbal editions issued in Latin, French and some German editions upto about 1540.

Johann Prüss. (BORN: c1447; DIED: 1510) *German/French printer.* Prüss' earliest known book is the *Formulare* of 1483.

REFERENCES: BMC XV: 1, 124 [IB 1682]. • Choulant, *Graphische Incunabeln*, 1858: p. 62-3, no. 15. • Cleveland *Herbal & Botanical Collections*, 1992: no. 20. • Copinger, *Hain's Repertorium, Supplement*, 1898-1902: 3, 267. • Goff: H-487. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8941*. • Hunt Botanical Catalog: no. 10. • IGI: no. 4901. • Klebs, *Incunabula Scientifica*, 1938: no. 509.3. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 50, no. 3. • Klebs, *Catalogue of Early Herbals*, 1925: no. 46. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 38. • Nissen (BBI): no. 2346. • NUC: 255, 431-4 [NH 0533373]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 115-7. • Proctor, *Index*, 1898-1906: no. 1447 [Köln, Quentell]. • Schramm, *Bilderschmuck der Frühdruk*, 1922-36: 20, p. 27. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4248. • Schullian & Sommer, *Catalogue of Incunabula*, 1948: 245. •

Stillwell, *Awakening Interest in Science*, 1970: H-417. (Prüss) ABF: I 860, 105-108; II 534, 202. • BMC XV. • Sitzmann, E., *Dictionnaire de biographie des hommes célèbres de l'Alsace depuis les temps les plus reculés*. Rixheim, 1909-10. 2 vols. • WBI.

2233. — Latin, c1497.

[HORTUS] Ortus Sanitatis | De herbis et plantis. | De Animalibus ⁊ reptilibus | De Auibus et volatilibus | De Piscibus ⁊ natatilibus (tibus | De Lapidibus ⁊ in terre venis nascē | De Urinis et earū speciebus | Tabula medicinalis Cum directo= | rio generali per omnes tractatus.

2°: a⁸ b-k⁶ l⁸ m-r⁶ s⁸ t-z⁶ Aa⁶ Bb⁸ Cc-Ee⁶ Ff⁸ Gg-Ii⁶ A⁸ B-C⁶ D⁸ E-H⁶ I⁸ K-Q⁶ R⁸ S-T⁶ V⁸ aa⁶ bb⁴ cc-ee⁶ (Q1 signed V); 360l.; no pagination or foliation. Two columns, Gothic letter, 54-55 lines.

RARE. Probably the second edition of Prüss' reprint of Meydenbach's *Hortus*, which shows only a few slight variations to his first reprint edition (see previous entry). Although identical, the woodcuts are sometimes not as fresh as those used in the earlier edition.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 63-4, no. 16. • Goff: H-488. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8942*. • IGI: no. 4902. • Klebs, *Incunabula Scientifica*, 1938: no. 509.2 [1496]. • Klebs, *Catalogue of Early Herbals*, 1925: nos. 2 & 47. • Kristeller, *Italianische Buchdruckerzeichen*, 1893: no. 39. • Nissen (BBI): no. 2364. • NUC: 255, 431-4 [NH 0533370-1]. • Polain, *Catalogue*, 1932: no. 2002. • Schramm, *Bilderschmuck der Frühdrucke*, 1922-36: 20, 27. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, no. 4249.

2234. — Latin, c1499.

[HORTUS] Hortus Sanitatis Major ... [Strassburg, Johann Prüss, c1499].

2°: 360l. Two columns, 56 lines per page in Gothic character.

RARE. Third edition of Prüss, being an almost exact reprint of his prior editions, with only slight variations in the text arrangement. The block of the large woodcut (apothecary and physician) is reduced in height in this edition. Before the second part (the tract on animals, etc.) appear four cuts, each with special headings arranged in a rectangle. Before the tract on the urine, there is a new woodcut of a patient in bed with three attending physicians, taken from Brunschwig's *Cirurgia*. Otherwise, the text figures appear to come from the same blocks as the preceding editions. Choulant believes this edition to be different than that quoted by Hain 8943.

The four full page woodcuts consist of: (1/2) apothecary sitting, and physician (repeated), (3) human skeleton, (4) patient in bed, and three attending physicians.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 64, no. 17. • Fairfax Murray (German): 194 [1507]. • Goff: H-489. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8943. • Klebs, *Incunabula Scientifica*, 1938: no. 509.4. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 50-1, no. 4. • Klebs, *Catalogue of Early Herbals*, 1925: no. 48. • NUC: 255, 431-4 [NH 0533376]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 117. • Proctor, *Index*, 1898-1906: no.

1448 [Köln, Quentell]. • Schreiber, *Manuel de la Gravure*, 1893-1911: 5, 4350 [1503].

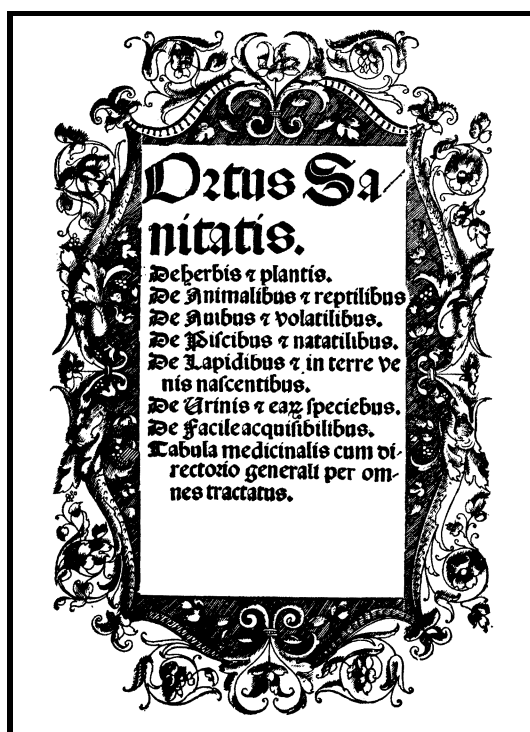
2235. — Latin, c1507.

[HORTUS] Ortus sanitatis. De herbis et plantis. De animalibus et reptilibus. De auibus et volatilibus. De piscibus et natatilibus. De lapidibus & in terre venis nascetibus. De vrinis et earū speciebus. Tabula medicinalis cum directorio generali per omnes tractatus. [Strassburg, Johann Prüss, ca. 1507].

2°: a⁸ b-k⁶ l⁸ m-r⁶ s⁸ t-z⁶ A⁶ B⁸ C-E⁶ F⁸ G-I⁶ K⁸ L-M⁶ N⁸ O-R⁶ S⁸ T-Z⁶ Aa-Bb⁶ Cc⁸ Dd-Ee⁶ Ff⁸ Gg⁶ Hh⁴ Ii-Ll⁶; ??l.; The woodcut initials used in this edition are from the same alphabet as that used in Prüss's 1507 edition.

RARE. The dating of this edition is uncertain.

REFERENCES: Fairfax Murray (German): 194 [dated c1507]. • Freilich *Sale Catalog*: no. 255. • Goff: H-489 [about 1499]. • Hain, *Repertorium Bibliographicum*, 1826-38: H 8943. • Klebs, *Incunabula Scientifica*, 1938: no. 509.4. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 4. • Nissen (BBI): no. 2365. • NUC: 255, 431-4 [NH 0533378-81]. • Proctor, *Index*, 1898-1906: no. 1448 [corrected in the 1902 supplement].



ORTUS SANITATIS, 1511

2236. — Latin, 1511.

[HORTUS] [Within a woodcut frame:] Ortus Sanitatis. | De herbis ⁊ plantis. | De Animalibus ⁊ reptilibus | De auibus ⁊ volatilibus. | De Piscibus

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z natatilibus. | De Lapidibus z in terre ve | nis nascentibus. | De Urinis z eaꝝ speciebus. | De Facile acquisibilibus. | Tabula medicinalis cum directorio generali per omnes tractatus.

2°: a⁸ b-k⁶ l⁸ m-r⁶ s⁸ t-z⁶ Aa⁶ Bb⁸ Cc-Ee⁶ Ff⁸ Gg-Ii⁶ A⁸ B-C⁶ D⁸ E-H⁶ I⁸ K-Q⁶ R⁸ S-T⁶ U⁸ aa-ff⁶ (ff⁶ blank); 368ℓ.; no pagination or foliation. Title within a woodcut border, three full page woodcuts, and very many smaller cuts of plants, animals, genre pictures, etc. throughout. COLOPHON (ff^{5v}): Impressum Venetijs per Bernardinum Benalium: Et | Joannem de Cereto de Tridino alias Tacuinum. | Anno Domini. M.ccccxix. Die. xi. augusti. | Regnante Inclito Duce Leonardo Lau- | redano Venetiarum Principe.

CONTENTS: a1r, Title.; a1v, Woodcut (Consultation of 6 physicians within a border).; a2r-Ii6v, De Herbis.; A1r, Sectional title page.; A1v, Woodcut (skeleton).; A2r-F6v, De Animalibus.; G4r-L5r, De Auibus.; L5v-P4v, De Piscibus.; P5r-V8v, De Lapidibus.; aa1r, Sectional title page.; aa1v, Woodcut (urine examine).; aa1r-bb4v, De Urinis.; bb5r-cc6v, Galenos' *Liber de Facile Acquisibilibus*.; dd1r-ff5v, *Tabula Medicinalis*.

RARE. Printed in Venice, by Bernardinus Benalium and Joannes Tacuinus de Cereto de Tridino in 1511. The first reprint of the Latin *Hortus* in Italy, valued for its fine woodcuts. The model for this reprint was according to Schreiber the Prüss edition of 1509, from which most of the cuts were copied. These cuts, being reversed copies show many times considerable variations from those in the editions of 1497-1509. They were modified to be more attractive to the Italian purchaser of the book. Several of the cuts appear to be newly added.

Two of the full page woodcuts by a Venetian master appear here for the first time. Both are surrounded by an ornamental border, white on a black background. Essling says that the second of these is a free copy of a similar image found in Kentham *Fasciculo de Medicina* (1493). The image of the skeleton is a direct copy from the Prüss edition, as is indicated by the inclusion of some German names for the bones, even though this book was printed in Italy for the Italian market. After the tract on urine, there follows a short tract from Galen, "Liber de Facile Acquisibilibus," translated by Nicolaus de Regio.

The three full page woodcuts consist of: (1) consultation of six physicians, surrounded by a fine border, (2) human skeleton, (3) four physicians examine urine flasks, with three attendants, surrounded by a fine border.

REFERENCES: Adams, *Cambridge Books*, 1967: H-1016. • Choulant, *Graphische Incunabeln*, 1858: p. 64, no. 18. • Essling, *Livres à Figures Vénitiens*, 1907-14: 3, 1723, p. 227 [two full page reproductions]. • Freilich *Sale Catalog*: no. 256. • Hunt Botanical Catalog: no. 12. • Klebs, *Catalogue of Early Herbals*, 1925: no. 49. • Mortimer *Italian Books*: no. 238 [NOT THIS EDITION FIX]. • Nissen (BBI): no. 2368. • NLM 16th Century Books (Durling): no. 2468. • NUC: 255, 431-4 [NH 0533385]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 118. • Sander, *Livre à Figures Italien*, 1941: no. 3470. • Schreiber, *Kräuterbücher*, 1924: p. xxv.

2237. — Latin, 1517.

[HORTUS] [Within a wide, arched woodcut frame:] [In red:] Ortus | Sanitatis | [in black:] De [in red:] Herbis [in black:] et [in red:] Plantis. | [in black:] De [in red:] Animalibus [in black:] et [in red:] Reptilibus. | [in black:] De [in red:] Auibus [in black:] et [in red:] Uolatilibus. | [in black:] De [in red:] Piscibus [in black:] et [in red:] Natatilibus. | [in black:] De [in red:] Lapidibus [in black:] et in terre ve- | nis nascentibus. | De [in red:] Urinis [in black:] et [in red:] earum speciebus. | Tabula medicinalis | [in black:] cum [in red:] Directorio [in black:] ge | nerali per omnes | [in red:] tractatus. | [in black:] Anno. M.D.XVII.

2°: a⁸ b-k⁶ l⁸ m-r⁶ s⁸ t-z⁶ A⁶ B⁸ C-E⁶ F⁸ G-I⁶ K⁸ L-M⁶ N⁸ O-R⁶ S⁸ T-Z⁶ 2A-2B⁶ 2C⁸ 2D-2E⁶ 2F-2G⁸ 2I-2K⁸; 356ℓ.; no pagination or foliation. Two column. Ornamental initials. Capital spaces with guide letters and paragraph marks.

CONTENTS: a1r, Title.; K1r, Four small woodcuts of animals, birds, fish and a man gathering stones.; K1v, Woodcut (skeleton).; K2r, De Animalibus.; Q4r, De Auibus.; U5v, De Piscibus.; Aa6r, De Lapidibus.; Gg1r, Small woodcut of a physician at a desk holding a flask, and a woman with hamper standing before him.; Gg1v, De Urinis.; Ii1r, *Tabula Medicinalis*.

VERY SCARCE. First edition of the *Hortus* produced by Renatus Beck, the successor of Prüss. Except for the skeleton cut, all the other full page woodcuts are omitted. The text cuts are the same as those used by Prüss, and are apparently imprinted from Prüss' woodblocks, some retouched, some are substituted by others.

Like the Prüss edition of 1499, after the section on plants there follows a leaf with four woodcuts with the headline, "Sequuntur alii tractatus" below. However, the cut of fishes is substituted by another, very similar one. At the start of the urine tract is a new small woodcut showing a physician, examining the urine flask presented him by a woman. The fine title border was cut by Urs Graf, and shows naked children and vine.

REFERENCES: Brunet: 3, 342. • Choulant, *Graphische Incunabeln*, 1858: p. 65, no. 19. • Cleveland *Herbal & Botanical Collections*, 1992: no. 29. • Hoover Collection: no. 433. • Hunt Botanical Catalog: no. 18. • Klebs, *Catalogue of Early Herbals*, 1925: no. 50. • Nissen (BBI): no. 2366. • NLM 16th Century Books (Durling): no. 2469. • NUC: 255, 431-4 [NH 0533388]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: p. 118. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10819. • Proctor, *Index*, 1898-1906: no. 10310.

2238. — Latin, 1536.

[HORTUS] Hortus sanitatis, quatuor libris haec quae snbsequuntur [!] complectens. De animalibus & reptilibus. De avibus & volatilibus. De piscibus & natatilibus. De gemmis & in vevis [!] terrae nascentibus ... Omnia castigatius, quam hactenus videre licuit ... Argentorati, Per Mathiam Apiarium, 1536.

2°: [5], 130ℓ. Title within ornamental border; printer's mark on verso of leaf 130. Another issue omits the sentence "Singula autem capita ..." from the

title. This edition does not contain book 1 "de Herbis," nor book 6 "de dispositione Urinae." COLOPHON: Argentorati in officina Mathiae Apiarij, mense martio. Anno M.D.XXXVI. VERY SCARCE.

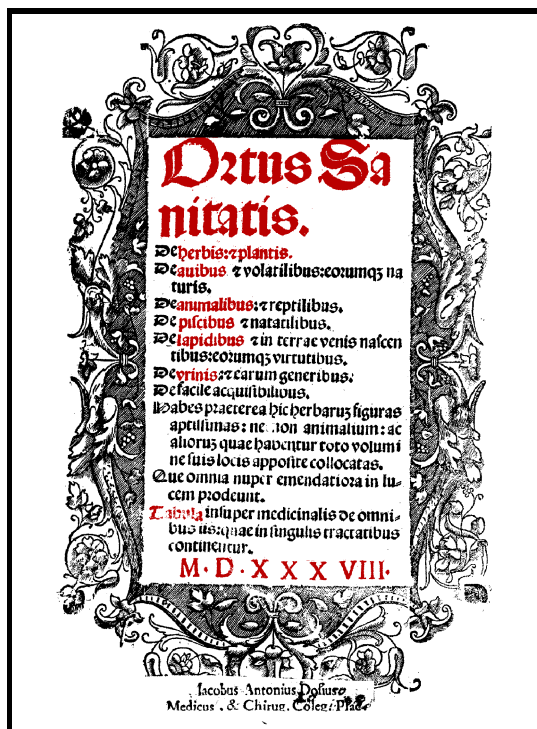
REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 65-6, no. 20. • NUC: 255, 431-4 [NH 0533392-5].

2239. — Latin, 1536.

[HORTUS] Ortus Sanitatis. De herbis: & plantis. De auibus & volatilibus ... De animalibus: & reptilibus. De piscibus & natatilibus. De lapidibus ... De vrinis ... De facile acquisibilibus. Habes praeterea his herbarum figuras aptissimas ... Que omnia nuper emendatiora in lucem prodeunt. Tabula ... [Uenetijs, Impressum per Bernardinum Benalium: Et Joannem de Cereto de Tridino alias Tacuninum] 1536.

2°: 368ℓ VERY SCARCE.

REFERENCES: Essling, *Livres à Figures Vénitiens*, 1907-14: no. 1723. • Hunt Botanical Catalog: no. 12. • Mortimer *Italian Books*: no. 238. • Nissen (BBI): no. 2368. • NUC: 255, 431-4 [NH 0533397]. • Sander, *Livre à Figures Italien*, 1941: nos. 3470 & 3470n.



ORTUS SANITATIS, 1538

2240. — Latin, 1538.

[HORTUS] [Within an ornamental woodcut border:] [In red:] Ortus Sa | nitatis. | [in black:] De [in red:] herbis: & plantis. | [in black:] De [in red:] auibus [in black:] & volatilibus: eorumq; na | turis. | De [in

red:] animalibus[in black:] : & reptilibus. | De [in red:] piscibus [in black:] & natatilibus. | De [in red:] lapidibus [in black:] & in terrae venis nascentibus: eorumq; virtutibus. | De [in red:] vrinis[in black:] : & earum generibus. | De facile acquisibilibus. | Habes praeterea hic herbarum figuras | aptissimas: necnon animalium: ac | aliorum quae habentur toto volumine | ne suis locis apposite collocatas. | Que omnia nuper emendation in lu= | cem prodeunt. | [in red:] Tabula [in black:] insuper medicinalis de omni= | bus iis: quae in singulis tractatibus continentur. | [in red:] M. D. XXX VIII.

2°: a-z⁶ Aa-Ii⁶ A-C⁶ D-E⁸ F-T⁶ U⁸ aa-ff⁶ (ff6 blank); 354ℓ.; no pagination or foliation. Gothic letter, with title in red and black within a woodcut border, three full page woodcuts (same as the 1511 edition), and very many text cuts of plants, animals, and genre pictures. COLOPHON (ff5v): Impressum Venetijs per Joannem de Cereto de T- | dino alias Tacuninum. Anno Dñi. M.D.XXXVIII. | Pensis Aprilis. Regnante Incipito | Duce Andrea Srito Vene- | tiarum Principe. PAGE SIZE: 302 x 210 mm.

CONTENTS: a1r, Title page.; a1v, Full-page woodcut.; a2r, "Prohemium."; a2v-li6r, "Tractatus De Herbis."; li6v, Blank.; A1r, Sectional title page, "Tractatus | De Anima | Libvs."; A1v, Full-page woodcut (Human skeleton).; A2r-G3v, Text of the Animalibus (animals).; G4r-L5v, Text of Avibus (birds).; L5v-P5v, Text of Piscibus (fish).; P6r-U8v, Text of Lapidibus (stones).; aa1r, Sectional title page, "Tractatus | de Urinis. Et liber Saleni: | De facile acquisi= | bilibus. | +."; aa1v, Full-page woodcut.; aa2r-cc5v, Text of De Vrinis (urine).; cc5v-cc6r, "Tabula huius operis."; cc6v, Blank.; dd1r-ff5v, "Tabula super tractatu de Herbis. [- de Animalibus - de Piscibus - de Lapidibus].; ff5v, Colophon (on a slip of paper pasted to the page).; ff6, Blank.

RARE. Edition not noticed by most of the standard bibliographies. A parts title-issue reprint of the Venice, 1511 edition, with a new title page, printed in red and black and dated 1538, and with several other variations in the text. The sectional title page to the treatise on animals is printed in Roman letter, but in the 1511 edition is printed in black letter. The large woodcut on the urines is partly changed and reduced. Some quires are taken from the 1511 edition, the printer apparently still being in possession of a part of the older 1511 edition. This is shown on the last printed leaf where a slip of paper with the 1538 colophon is pasted over the original 1511 colophon.

REFERENCES: Klebs, *Catalogue of Early Herbals*, 1925: no. 51. • Nissen (BBI): no. 2369. • NUC: 255, 431-4 [NH 0533399].

French editions

2241. French transl., c1500: [HORTUS] Ortus sanitatis | translate de Latin | en Francois.

2 vols. [vol 1] 2°: CLXXV (i.e., 275), [16]ℓ.; [vol 2] 2°: CLXX, [14]ℓ. Bâtarde type. Two columns, 49-50 lines. Five full-page woodcuts (on versos of each volume title, leaf K5, and the section title of the final treatise on urine, one repeated), 540 half-page column-wide woodcuts of plants, animals, and precious stones. 3 woodcut titles in grotesque calligraphic style, numerous calligraphic woodcut

HERBALS: HORTUS SANITATIS



ORTVS SANITATIS, 1500

initials with grotesque human faces throughout. Woodcut printer's device on the last leaf.

VERY RARE. First French edition and the only complete translation of the *Hortus Sanitatis*, printed in Paris by Anthoine Vêrard [see note below]. It is a magnificent monument of early French typography, and one of the finest of the Hortus editions, of which only a few examples are known. The first volume describes the herbs, the second beasts, fishes, and stones, and includes the tract on urine. At the end are extensive indexes.

The fine large woodcuts represent: (1, verso of title leaf and repeated on leaf R1v of the second volume) an ecclesiastical person seated in a chair, with several other figures, one of them presenting a book, (2, leaf K5v) an author presenting his book to King Charles VIII on horseback with other persons engaged in flying hawks, (3, leaf aa1v) apothecary's shop, (4, leaf A1v) human skeleton. The full page cuts 3 and 4 appear to be copied from the original Grüninger cuts, although the text illustrations appear to be derived from the second Latin edition of the *Hortus* (assigned to Strassburg, Prüss, not after 21 October 1497).

Anthoine Vêrard. (BORN: ; DIED: Paris, France, 1513) *French illuminator, wood engraver, printer & bookseller.* Vêrard flourished in Paris from about 1485 to 1512. Scarcely anything is known of his life, other than his shop occupied a series of buildings in Paris, and that he illustrated and published a series of works. He is thought to have illuminated a *Danse Macabre* printed on vellum, of which only two copies exist.

REFERENCES: BNIC: H-297. • Brunet: 3, 342 [wrong collation]. • Choulant, *Graphische Incunabeln*, 1858: p. 73, no. 37 [not seen]. • Claudin, *Histoire de l'Imprimerie*, 1900-15: 1, 191 or 2, 504. • Fairfax Murray (French): 1, no. 227. • Goff: H-490. • Hain, *Repertorium Bibliographicum*, 1826-38: HC 8958 [wrong collation]. • IGI: no. 4903. • Klebs, *Incunabula Scientifica*, 1938: no. 509.5. • Klebs, *Herbals of the Fifteenth Century*, 1917-8: p. 51, no. 5 [476

leaves]. • Klebs, *Catalogue of Early Herbals*, 1925: no. 52. • Macfarlane, Anthoine Vêrard, no. 140. • Nissen (BBI): no. 2373. • NUC: 255, 431-4 [NH 0533402]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 119-22. • Pellechet, *Catalogue General des Incunables*, 1970: no. 5755. • Polain, *Catalogue*, 1932: no. 2004 (& supplement) [about 1503?]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10835. (Vêrard) Bryan's Dictionary of Painters, 1903-4: 5, 280. • Biographie Universelle: 43, 132-3. • Nouvelle Biographie Générale (Hoefer): 45, cols. 1093-5.



HORTUS SANITATIS, 1529

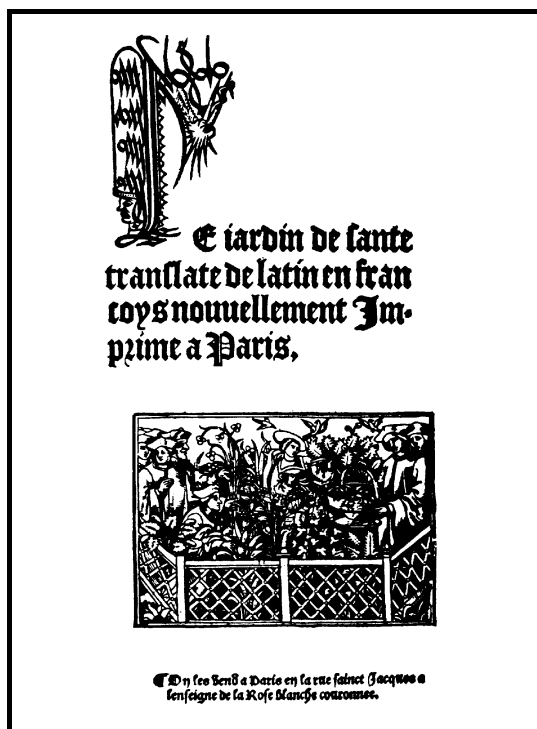
2242. French transl., 1529: [HORTUS] Hortus sanitatis, translate de latin en francois. Paris, 1529.

Two parts in one volume. [Part 1] 2°: 246, 12l.; [Part 2] 2°: 149, 20 leaves (the last blank). Two columns, Gothic letter, 54 lines. Title printed in red and black, with a fine woodcut (repeated on the title to the second part), large woodcut on the verso of the title leaf, two other large woodcuts (1: human skeleton; 2: apothecary's shop), over 1,000 smaller text woodcuts of plants, animals, birds, precious stones, etc. Woodcut initials. Printer's device (large initial with head and bird).

VERY RARE. Second edition of the French translation of the *Hortus Sanitatis*. It contains nearly the same illustrations as the Vêrard edition. The text cuts reappear with few exceptions, printed from the old blocks, also the skeleton and the apothecary's shop, borrowed by Vêrard from Strassburg. There are also some newly added cuts not copied from any German herbal, but probably derived from some work on chivalry. (Klebs/Becher)

REFERENCES: Brunet: 3, 342 & Suppl. I, 657. • Klebs, *Catalogue of Early Herbals*, 1925: no. 53. • NUC: 255, 431-4 [NH 0533403]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 10836.

2243. French transl., 1539: [HORTUS] Le iardin de sante | translate de latin en fran | coys nouvellement Im= | prime a Paris | [Woodcut] | ¶ On les vend a Paris en la rue saint



LE IARDIN DE SANTE, 1539

Jacques | a lenseigne de la Rose Blanche couronnee.

[TITLE OF VOLUME TWO READS:]

Le traicte des bestes, | oyseaulx, poissons, pier | res precieuses, et urines | du iardin de sante.

2 parts in one volume. A⁸ B-X⁶ y⁶ AA-SS⁶ TT⁴ ā⁶ ā⁶ a-ff⁶ gg⁸; 428ℓ.; Part 2 has a separate title page. Imprint from colophon. Printer's device on leaf Tt4 and at the end. Some illustrations repeated in different chapters. Picture on recto of b1 printed upside-down. Includes indexes. PAGE SIZE: 308 x 204 mm.

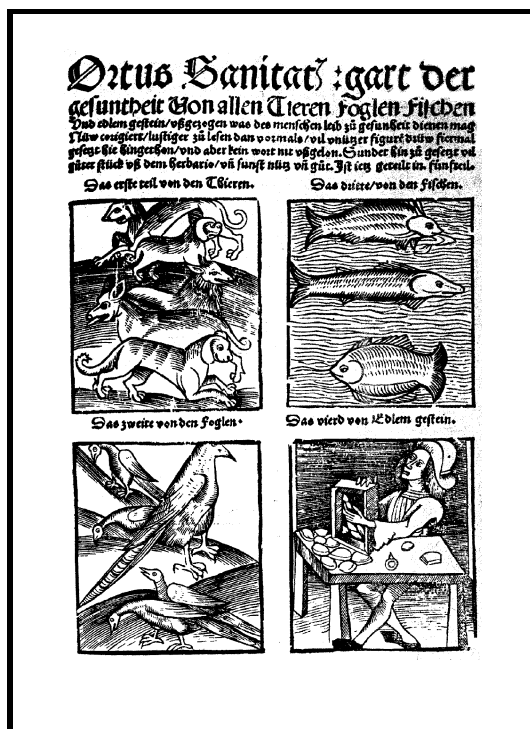
VERY SCARCE. A reprint of the second edition of 1529. It is printed in two volumes, which are usually found bound together. It is inferior in typography to the Vérard's edition of 1500, but has nearly the same illustrations.

Apparently 3rd French ed.; cf. C.W. Traylen, *Catalog* 93, no. 385. Mentioned by Klebs/Becher (no. 53).

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 73, no. 38 [not seen]. • Mortimer *French Books*: no. 321. • NUC: 255, 431-4 [NH 0533405]. • Payne, 'Herbarius' and 'Hortus Sanitatis', 1901: pp. 122-4.

2244. — German, 1529.

[HORTUS] Ortus Sanitatis: gart der | gesundheit von allen Tieren foglen fischen | Vnd edlem gestein/ vszgezogen was des menschen leib zū gesuntheit dienen mag | Nüw corrigiert/ lustiger zū lesen dan vormalis/ vil vnützer figuren drüw fiermal | gesetzt hie hingethon, vnd aber kein wort nit vszgelon. Sundet hin zū gesetzt vil | guter stück vsz dem herbario/ vñ sunst nütz vñ gut. Ist jetz geteilt in fünfteil. | [Four small woodcuts depicting animals, fish, birds and stones arranged in a square, with each



ORTUS SANITATIS, 1529

cut having a description above].

2°: [6], [2], 135ℓ. Two columns, Gothic type.

RARE. Printed in Strasbourg by Johannes Grienynger on the 17 March 1529.

REFERENCES: Choulant, *Graphische Incunabeln*, 1858: p. 69, no. 26. • Nissen (BBI): no. 2372.

HERBIN, Johann. (BORN: 1633; DIED: 14 February 1676) *German theologian.*

REFERENCES: ADB. • DBA: I 517, 24-30; II 563, 328. • Gerber, *Historisch-biographisches Lexikon*, 1812-4. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Poggendorff: 1, col. 1075. • WBI.

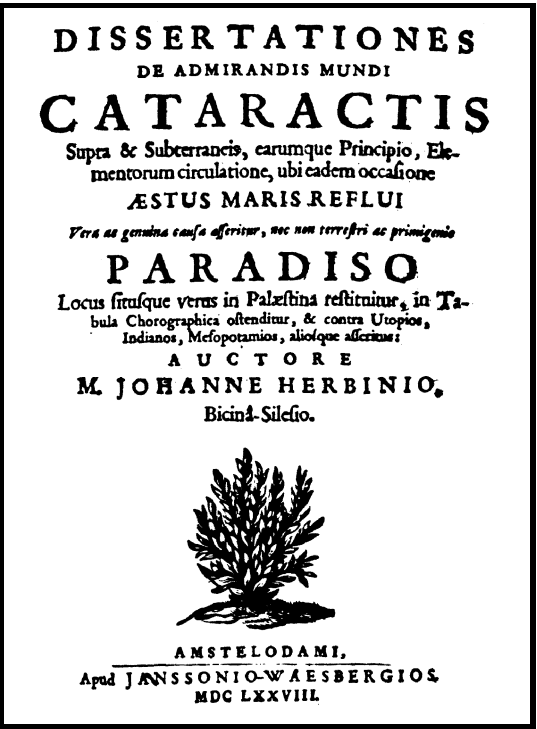
2245. — Latin, 1675.

Religiosae Kijovienses Cryptae, sive, Kijovia Subterranea, in quibus labyrinthus sub terra, et in eo emortua, a sexcentis annis, divorum atque heroum Graeco-Ruthenorum, & nec dum corrupta, corpora, ex nomine atque ad oculum, e Paterikon Sclavonica detegit ... M. Johannes Herbinus ... Jenae, Impensis Martini Hallervordi, literis Johannis Nisii, Anno 1675.

8°: π² A⁷) (4 B-L⁸ M⁴; 99ℓ.; [20], 178 p., [6] leaves of plates (some folded), illus., music (engraving). Title page in red and black. Added engraved title page.

VERY SCARCE. Concerns the subterranean crypts of a monastery at Kiev, Russia.

*S1 Kievan Russia—Church history. *S2 Kyievo-Pechers'ka lavra—Early works to 1800.



DISSERTATIONES, 1678

REFERENCES: Estreicher, *Bibliografia Polska* XIX *Stulecia*, 1959- : 18, 127. • LKG: XIV 744.

2246. — Latin, 1678.

Dissertationes | De Admirandis Mundi | Cataractis
| Supra & Subterraneis, earumque Principio, Ele-
| mentorum circulatione, ubi eadem occasione |
Æstus Maris Reflui | Vera ac genuina causa
asseritur, nec non terrestri ac primigenio | Paradiso
| Locus situsque verus in Palæstina restituitur
in Ta- | bula Chorographica ostenditur, &
contra Utopios, | Indianos, Mesopotamios, zliosque
asseritue: | Auctore | M. Johanne Herbinio |
Bicinâ-Silesio. | [ornament] | Amstelodami, | [rule]
| Apud Janssonio-Waesbergios. | MDC LXXVIII.

4°: [12], 267, [16] p., illus. PAGE SIZE: 195 x 153 mm.

VERY SCARCE. Astonishing study of the underground cataracts, sources, fountains, rivers, artificial rivers, marine tides, currents, abyssals zone, and the situation of the Paradise. The author explains the tides by a water arrival of the abyssals zone which it locates in the polar areas. This work is illustrated in a baroque taste that recalls Kircher's books. It is magnifiquement illustrated by beautiful allegorical frontispice, 4 plates (3 folding), and 22 engravings in the text.

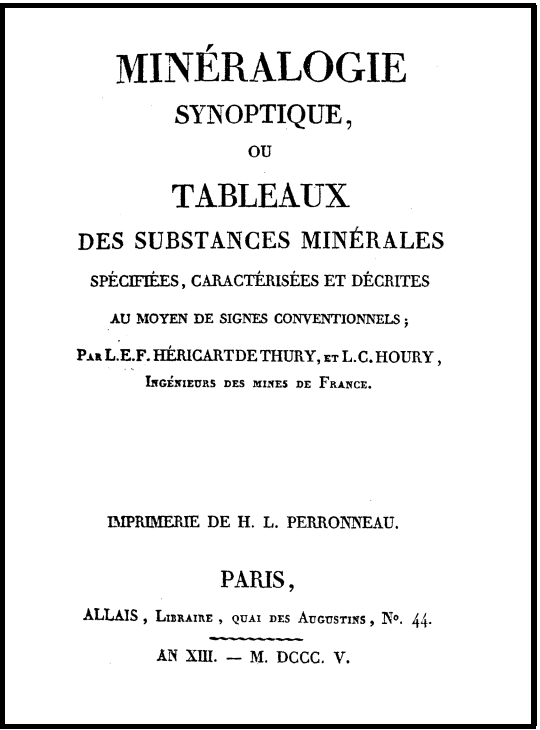
REFERENCES: *Freilich Sale Catalog*: no. 241. • Thorndike, *History of Magic*, 1923-58: 7, 587. • Ward &

Carozzi, *Geology Emerging*, 1984: no. 1051. • Wellcome Catalog (Books): 3, 251.

HÉRICART DE THURY, Louis Étienne François.
(BORN: Paris, France, 3 June 1776; DIED: Rome, Italy, 15 January 1854) *French mining engineer.*

From 1810 Héricart was the Chief Engineer of Mines and from 1810 to 1830 Director of public buildings in Seine-Departement. He was elected a member of the French Academy of Sciences in 1824.

REFERENCES: ABF: I 514, 141-153; II 338, 18.
• Beauchamp, *Biographie Moderne*, 1816. • *Biographie Universelle*. • Lambrecht & Quenstedt, *Catalogus*, 1938: 198.
• *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 1076. • WBI.



MINÉRALOGIE SYNOPTIQUE, 1805

2247. — French, 1805.

Minéralogie | Synoptique, | ou | Tableaux | Des
Substances Minérales | Spécifiées, Caractérisées Et
Décrites | Au Moyen De Signes Conventionnels; |
Par L.E.F. Héricart De Thury, et L.C. Houry, |
Ingénieurs des mines de France. | Imprimerie De
H.L. Perronneau. | Paris, | Allais, Libraire, quai
des Augustins, N° 44. | [wavy rule] | An XIII. —
M. DCCC. V.

8°: [1]-160, [2] p. PAGE SIZE: 200 x 122 mm.

CONTENTS: [1-2], Half title page, "Minéralogie |
Synoptique." verso blank.; [3-4], Title page, verso blank.;
[5], Dedication to René Just Haüy.; [6], Blank.; [7]-
45, Introduction.; [46], Blank.; [47], Sectional title page,
"Minéralogie Synoptique, | ou | Tableaux | des |
Substances Minérales. | [rule] | [...6 lines of quotation,

signed Bergmann... | [rule]."; 48–151, Tables.; [152], Blank.; [153]–160, "Table Alphabétique | Des Noms | Français, Allemands et Latins."; [1 page], "Fautes A Corriger."; [1 page], Blank.

VERY SCARCE. Co-authored with L.C. Houry [see note below]. This work outlines a new method for systematically describing minerals based on 22 characteristics. The introduction provides a description of the method, which stresses practical aspects. Using qualities such as color, hardness, crystal structure, chemical composition, and electrical and magnetic properties over 200 minerals are described on a series of tables. At the close is a dictionary of mineralogical synonyms in French, German and Latin.

Louis Clément Houry. (BORN: c1780; DIED: After 1843) *French mining expert.* French mining expert.

REFERENCES: BL. • CBN. • LKG: XII 169*. • NUC: [no copy listed]. (Houry)

HERMANN, Paul (i.e., Paulus Hermmanus). *German physician & botanist.*

Hermann was the medical officer to the Dutch East India Company between 1672 and 1677. In 1679, he was appointed to the chair of botany at the University of Leiden.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78: 8, 670-1. • Engel, *Dutch Zoological Cabinets*, 1986: no. 673.

2248. — Latin & Dutch, 1711 [Sale catalog].

Catalogus Musei Indici continens varia exotica, tum animalia, tum vegetabilia ... in liquore ... asservata; ut et varia arida curiosa ... quin etiam ... collectionem concharum ... quae ... collecta sunt a ... P. Hermanno ... jam vero publica auctione distraherentur, etc. Latin & Dutch. Lugduni Batavorum, [1711.]

12°:

VERY RARE. A sale catalog describing foreign plants and animals preserved in alcohol, insects, minerals, precious stones, medicinal roots, woods, seeds, fruits, shells, etc.

REFERENCES: BL: [B.677.(1.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9. • Murray, *Museums*, 1904: 2, 285 [long note]. • Wilson, *History of Mineral Collecting*, 1994: 175.

2249. — Latin, 1714 [Collection catalog].

Musæum Zeylanicum, continens Plantarum, Animalium, & Mineralium, quæ Zeylana insula suppeditat, Historiam. Lugduni Batavorum, 1714.

4°: 71 p.

VERY RARE. There is also a catalog of plants published in 1717.

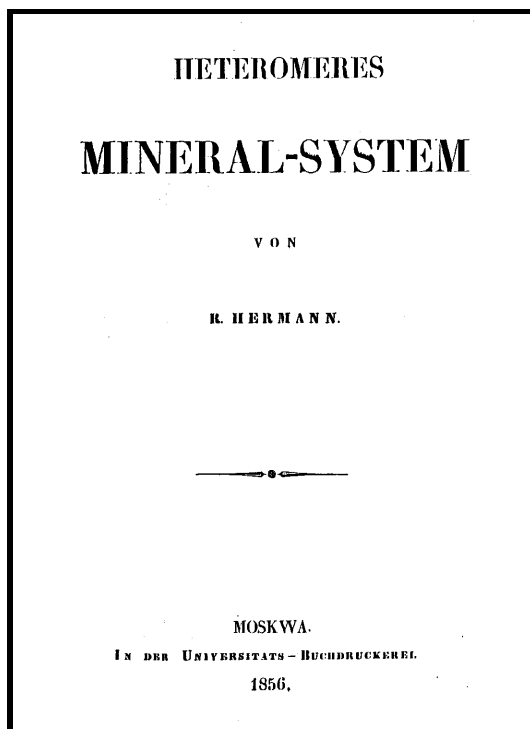
REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 76. • Murray, *Museums*, 1904: [not listed]. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 3995.

HERMANN, Rudolph.

REFERENCES: Pogendorff: 1, cols. 1080-1.

2250. — German, 1856 [First edition].

Heteromeres | Mineral-System. | von | R. Hermann. | [ornate rule] | Moskwa. | In der Universitäts — Buchdruckerei. | 1856.



HETEROMERES MINERAL-SYSTEM, 1856

4°: [4], 213, [1] p. (last p. blank). Presents the author's ideas of a mineral classification system. RARE.

REFERENCES: *Katalog Bergakademie Freiberg*, 1879: p. 294 [VI. 896.]. • NUC.

2251. 2nd edition, 1860: Heteromeres | Mineral-System. | von | R. Hermann. | [rule] | Zweite umgearbeitete Auflage. | [rule] | [In two columns separated by a vertical rule] | Moskwa. | Moritz Arlt. | [vertical rule] Leipzig. | Franz Wagner. | 1860.

4°: π¹ 1-264 273; 108ℓ.; [2], [1]-214 p., index. PAGE SIZE: 292 x 126 mm. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [1]-30, "Einleitung."; [31]-208, "Systematische Eintheilung der Mineralien nach den Principien der Heteromerie."; [209]-214, "Register."

Allgemeine Beschreibung der Mineralien-Sammlung von Rudolph Hermann im Zusammenhange mit seinen Arbeiten und seinen mündlichen Angaben entworfen von N. Vischniakoff. (Moskau, 1900).

See: Vischniakoff, Nikolai Petrovich.

HERMELIN, Samuel Gustaf Benzelstierna, Friherre. (BORN: 4 April 1744; DIED: Stockholm, Sweden, 4 March 1820) *Swedish cartographer.*

REFERENCES: *Svenskt Biografiskt Handlexikon*: 1, 489.

2252. — Swedish, 1804 [First edition].

Försök till Mineral Historia öfver Lappmarken och Vesterbotten. Stockholm, Tryckt hos Carl Delén, 1804.

4°: [2], 70 p., 3 plates.

VERY SCARCE. Also contained in Hemerlin's *Försök till beskrifning öfver Lappmarken* (1810).

REFERENCES: LKG: XIV 812.

HERNÁNDEZ

2253. German transl., 1813: Freyherrn S.G. Hermelin's | Königl. Schwed. Bergraths, | Minerographie | von | Lapland und Westbothnien, | nebst | einem Auszuge | aus | Wahlenberg's Topographie von | Kemi-Lappmark. | [rule] | Aus dem Schwedischen | mit einigen Anmerkungen | von | Johann Georg Ludolph Blumhof, | [...3 lines of titles and memberships...] | [tapered rule] | Mit drey Kupfertafeln. | [tapered rule] | Freyberg, 1813. | bey Craz und Gerlach.
8°: A-L⁸ M² χ¹; 91ℓ.; [i]-x, [11]-179, [3] p., 3 folded plates.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to "Herrn Professor Hausmann"; [iv], Blank.; [v]-x, Translators forword signed "Ludwigshütte, bey Biedenkopf, im August 1812. I.G.L. Blumhof."; [11]-152, Text by Hermelin.; [153]-179, Text by Wahlberg [sic!]; [1 pg], Editors advertisement.; [2 pgs], Errata and corrigenda.

VERY SCARCE. Translation by Johann Georg Ludolph Blumhof of S. G. Hermelins *Försök till mineralhistoria öfver Lappmarken och Vesterbotten* and G. Wahlenbergs *Geografisk och ekonomisk beskrifning om Kemi Lappmarken* both (Stockholm, 1804). [Entry by Johan Kjellman]

REFERENCES: LKG: XIV 812.

2254. — Swedish, 1806.

Special Kartor och Ritningar till Beskrifning öfver Sverige. Stockholm, 1806.

8°:

VERY SCARCE. Maps of Sweden, including four petrographic maps.

REFERENCES: LKG: XIV 810*.

HERNÁNDEZ, Francisco. (BORN: Near Toledo, Spain, c1514; DIED: Madrid, Spain, 1578) *Spanish physician & naturalist.*

Hernandez studied medicine at the University of Alcalá. He was a friend of Vesalius and followed his lead in dissecting. One of the early defenders of the lesser circulation. In Mexico City he experimented on the medicinal properties of the local drugs. He did his best to establish a Mexican pharmacology based on local plants. His translation of Pliny contains extensive geographical commentaries. During his final year in Mexico, he was in charge of the battle against the terrible epidemic, *cocoliztle*, that wiped out half of Mexico. He left an important clinical study of the disease. Apparently began his career as physician to the Duke of Maqueda (near Toledo) for a brief time, then practiced several years in Seville.

He occupied the most important medical position in Spain at that time, physician of the hospitals of the Monastery of Guadalupe. He was probably there in the late 60's. This position was virtually the antechamber to the royal chamber. He directed the botanical garden, and botanized in the area. Here also his anatomical studies. When he returned to Toledo apparently about 1567, he was in contact with the court; by about 1568 he became physician to the Chamber of the King.

By order of Philip II, went to Mexico to study the flora and fauna, with particular attention to medicinal properties, 1570-77. While in Mexico he was protomedico for the colony. The two pinnacles of Spanish medicine were the royal chamber and the office of protomedico, both of which he held (the latter for Mexico). Both positions salaried. The expedition to Mexico carried a salary of 2,000 ducats. He dedicated the translation (with commentary) of Pliny to Philip II; this work was not published during his life. When Hernández returned to Spain, his friends at court were no longer in such influence, and Hernández was rewarded for his herculean endeavors largely by indifference. His great natural history was not published as, of course, he had hoped. He left behind

a revealing memorial to the court and a Latin poem to his friend Arias Montano. During his final years he was appointed physician to the young prince who became Philip III. Hernández learned the indian language and translated some of his materials into it because he was convinced the pharmacological information would be useful to them.

REFERENCES: ABE: I 438, 97-163; 1073, 237-320; II 444, 276-418; III 299, 318-333. • Alvarez Lopez, E., "El Dr. Francisco Hernández y sus comentarios a Plinio," *Revista de Indias*, 3 (1942), 251-90. • Barreiro, A.J., "El testamento del doctor Hernández," *Boletín de la Real Academia de la Historia*, 94 (1929), 475-97. • *Diccionario Porrúa*. • DSB. • López Piñero, *Diccionario Histórico*, 1983. • López Piñero, J.M., *Ciencia y técnica en la sociedad española de los siglos XVI y XVII*. Barcelona, Labor, 1979. [1]-511 p. • López Piñero, J.M., *El código Pomar (ca. 1590), el interés de Felipe II por la historia natural y la expedición Hernández*. Valencia, 1991. • Picatoste, *Biblioteca Científica Española*, 1891. • WBI.



QVATRO LIBROS, 1615

2255. — Spanish, 1615 [First edition].

[Contained within an ornamental border of printed flowers:] [Leaf] * Qvatro Libros. * [Leaf] | De La Natv- | raleza, Y Virtvdes De Las | plantes, y animales que estan receuidos en el vso | de Medicina en la Nueva España, y la Methodo, y orrec- | cion, y preparacion, que para administrallas se requiere | con lo que el Doctor Francisco Hernandez escriuio | [tilde] — en lengua Latina. [tilde] | Mvy Vtil Para Todo Genero De | gente q̄ viue en estãcias y Pueblos, do no ay Medicos, ni Botica. | ¶ Traduzido, y aumentados muchos simples, y Compuestos | y otros muchos secretos curatiuos, por Fr. Francisco Xi- | menez hijo del Conuento de S. Domingo de Mexico, | Natural de la Villa de Luna del Reyno de Aragon. | ¶ A Nño R.P. Maestro Fr. Hernando Bazan, Prior Prouincial de | la Prouincia de Sãtiago de Mexico, de la Orden de los Predicadores, | y Cathedratico

Iubilado de Theologia en la Vniuersidad Real. |
[ornament] | ¶ En Mexico, en casa de la Viuda de
Diego Lopez Daualos. 1615. | ¶ Vendēse en la tienda
de Diego Garrido, en la esquina de | la calle de
Tacuba, y en la Porteria de S. Domingo.

4^o: ¶¶ A-Z⁴ Aa-Zz⁴ Aaa-Ddd⁴ Eee² (A3
missigned A2); 206ℓ.; [5], 194 (wrongly numbered 1-4,
4-6, [8]-23, 23-35, 32, 37-146, 149, 148, 149-150, 161-
203), [7]ℓ

VERY SCARCE. **REWORK THIS COMMENTARY**
VERY RARE. This is the first book on plants and
minerals published in the New World. The translator
was Francisco Ximénez [1666-c1722].

The *Quatro Libros* was the first milestone after
the publication of the Index medica-mentorium by
Barrios was a much more substantial text, based on a
manuscript of Recchi's selection. The manuscript itself,
unknown today, had been "signed" by Francisco Valles.
We now know that it belonged, at least as late as 1609,
to Barrios. In 1615 fray Francisco Ximenez saw through
the press *Quatro Libros. De la naturaleza, y virtudes
de las plantas, y animales*. The text of the *Quatro
Libros* is organized into four books, each subdivided into
sections. The first three books are on aromatics, trees,
plants, and fruits; herbs with a sharp taste; herbs that
taste salty or sweet; and herbs that have a bitter taste or
no taste at all; the fourth book deals with animals and
minerals whose derivatives can be used as medicines.
Two tables list illnesses and remedies (not based on the
Index medicamentorum). Altogether the book contains
478 chapters translated into Spanish from Hernandez's
work, with some annotations and additions supplied by
Ximenez. The stated purpose of this book was to be a
handbook for use in places where there was no accessible
pharmacy.

Until the appearance of the Complutense
manuscript, it was not always clear where Hernandez
ended and Ximenez began, because although the editor
was deferential to the author, he would occasionally add
a note from his own experience without distinguishing
it as such. Apart from a frontispiece portrayal of
Saint Dominic, the book has no illustrations, so that
identification of plants with confusingly similar names
is sometimes impossible. A lay hos-pital brother who
arrived in New Spain in 1605, Ximenez worked at some
time in the Hospital de la Santa Cruz, where he was
in charge of the hospital's pharmacy. He apparently
had received no formal medical training, but he did
write a book, *Memoria para la salud*, now lost. His
only tangible contribution to the history of medicine is
thus his edition of Hernandez.

The Huntington Library copy of the *Quatro
Libros*, which Henry Harisse bought in Paris in 1871, is
not only in exceptionally good condition for a handbook
that was meant to be used frequently: it is also
annotated. The ink has faded, but the barely legible
annotations reveal that someone wrote in the margins,
in Spanish, key words, mostly indicating parts of the
body that are mentioned in the text. Clearly, the

annotations were meant to serve as a quick finding aid
for practical purposes, and so they confirm exactly what
the book was intended to do.

We do not know the extent of the print run of
the *Quatro Libros*, but it was probably small-perhaps
a few hundred copies-as most Mexican imprints of its
time seem to have been. Copies of the *Quatro Libros*
have always been rare, especially in Europe, where, as
we shall see, only one or two copies turned up in the
seventeenth century. They were promptly put to good
use.

REFERENCES: Hunt Botanical Catalog: no. 200.



RERVM MEDICARVM NOVÆ HISPANIÆ, 1651

2256. — Latin, 1651.

[Contained within an elaborate engraved compartment:]
Rervm Medicarvm | Novæ Hispaniæ | Thesavrsv
| Sev | Plantarvm Animalivm | Mineralivm
Mexicanorvm | Historia | Ex Fancisci Hernandez
| Noui Orbis Medici Primarij relationibus | in ipsa
Mexicana Vrbe conscriptis | A Nardo Antonio
Reccho | Monte Coruinat Cath. Maiest. Medico
| Et Neap. Regni Archiatro Generali | Iussu.
Philippi II. | Hisp. Ind. etc. Regis | Collecta ac
in ordinem digesta | À Ioanne Terrentio Lynceo
| Constantiense Germ.º Phō ac Medico | Notis
Illustrata | Nunc primū in Naturaliū rez Studiosoz
gratiā | lucubrationibus Lynceorū publici iuris

HÉRON DE VILLEFOSSE

facta. | Quibus Jam excussis accessere demum alia
| quoꝝ omnium Synopsis sequenti pagina ponitur
| Opus duobus voluminibus diuisum | Philippo
III. Regi Catholico Magno | Hispaniaꝝ vtriusq;
Siciliæ et Indiarũ etc. Monarchæ | dicatum. |
[At the bottom:] Romæ Superioꝝ permissu. Ex
Typographeio Vitalis Mascardi. M. DC. XXXXI.

2^o: ✠⁴ a² b⁴ c⁴ D⁴ A-Z⁶ Aa-Pp⁶ ✠¹ Qq-Zz⁶ Aaa-
Zzz⁶ Aaaa-Kkkk⁶ Llll² A-M⁴; 548ℓ.; [32], 1-456, [2],
457-950 (i.e., 952), [2]; 1-90, [6] p., engraved title page,
letter-press title printed in red and black, c800 woodcut
text illus., table. Page 110 is wrongly numbered 011,
500 is 400, 698 is 968. PAGE SIZE: 320 x 218 mm.

CONTENTS: [2 pgs/=✠1rv], Engraved title page, verso
blank.; [2 pgs/=✠2rv], Dedication to Philip IV dated Oc-
tober 1650.; [2 pgs/=✠3rv], "Iacobvs Mascardvs | Ty-
pographvs | Lectoris." (concerns the authors of the various
parts of the book).; [1 pg/=✠4r], "Imprimatur..."—dated
1651.; [1 pg/=✠4v], "Totius Histoire, ..." (=table of con-
tents).; [4 pgs/=a1r-a2v], "Index | Medica Mentorvm |
Novæ Hispaniæ"; [14 pgs/=b1r-c3v], "Index | Plantarvm |
Animalvm, Et Mineralvm, ..."; [4 pgs/=c4r-D1v], "Index |
Avthrorvm Virorvmq.;" [1 pg/=D2r], "Vocum quarundam
Americanum explicatio.;" [1 pg/=D2v], "Errata Sic Corri-
genda.;" 1-456 (i.e., 952)/=A1r-Pp6v, Text.; [2 pgs/=✠1],
"Aliorvm | Novæ Hispaniæ | Animalvm |" verso ded-
ication to Cardinal Barberinvm.; 457-950/=Qq1r-Kkkk6v,
Llll2r-Llll2v, Text continued.; [1 pg/=Llll2r], "Amico Lec-
tori.;" [1 pg/Llll2v], "Index Tabvlarvm.;" 1-90/=A1r-M1v,
"Historia Animalium | Liber Unicus.;" [5 pgs/=M2r-M4r],
"Indices | Alphabetici.;" [1 pg/=M4v], "Errata Sic Cor-
rige."

VERY SCARCE. **REWORK THIS ENTRY.** Book
10 (pp. 335-344) of this work concerns minerals. It
provides a glossary and description with Aztec name
and a Latin equivalent. There are no illustrations.

The earliest published version of Hernandez's
great natural history of Mexico appeared in Spanish
translation, unillustrated, at Mexico City in 1615. The
Latin edition, with considerable additions to the text as
well as numerous illustrations, was prepared in Rome by
the Accademia dei Lincei and was first printed in 1628,
but only a few copies had been distributed when its
patron, Prince Federico Cesi, died, leaving the project
without funds. Due to the efforts of Francesco Stelluti
of the Accademia dei Lincei, who succeeded in obtaining
the patronage of the Spanish ambassador in Rome,
Don Alfonso Turiano, publication was revived and the
original sheets were reissued in 1648, 1649 and 1651.
The present copy is the last of these issues in terms
of the title-pages; however it retains the three original
dedications to Cardinal Barberini, which were cancelled
in some copies, and has in addition the dedication to
Roderico de Mendoza which was substituted for the
third of them. There are numerous 'complexities of the
bibliography and the printing of the Lyncei edition, for
such it remains ... The compiler has not seen nor heard
of any two copies which are exactly alike in arrangement
or in the presence or absence of the name Barberini in
the dedications' (Arents).

Hernandez, physician to Philip II of Spain, was
sent in 1570 to study the flora and fauna of Mexico,

where he worked until 1577. His researches remained
unpublished at his death in 1587 and his successor as
royal physician, Leonardo Recchi, was entrusted with
the task of examining anew the mass of materials left
by Hernandez and of preparing a suitable abridgement
for the press. Recchi in turn died before he was able to
publish his work, but it is his rendering of Hernandez
that was used for the 1615 Spanish translation and
which forms the basis of the Rome edition: 'with
its brilliant appended treatises, it was here at last
that Hernandez's work received the recognition that it
deserved. Though only a small part of all that he had
written, it is a monument of industry and erudition, the
more remarkable as being the first on the subject, and
even today it still holds its place as a book of the highest
authority. Hernandez was henceforward referred to as
'the third Pliny'' (Hunt).

Facsimile reprint, 1992: *Rerum Medicarum Novæ
Hispaniæ Thesaurus.* Romæ Ex Typographeio Vitalis
Mascardi, 1599. Ristampa anastatica, Roma, 1992.

Abstracted English transl., c2000: *The Mexican Treasury.
the Writings of Dr. Francisco Hernandez.* By Simon Varey,
editor. Stanford, Stanford University Press, c2000. 4^o:
xix, 281 p., frontispiece (map), 64 illustrations. ISBN
0804739633.

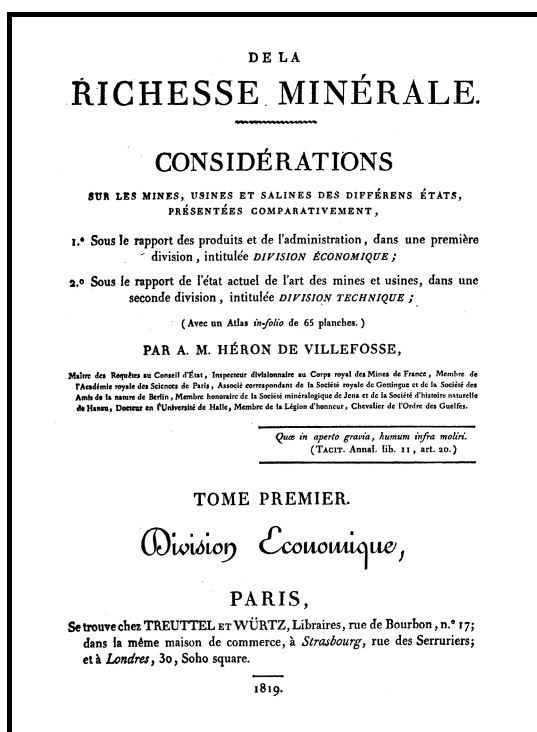
This volume consists of a selection of English
translations from the extensive writings of Dr. Francisco
Hernandez [1515-1587]. Celebrated in his own day as
one of Spain's leading physicians and naturalists, he is
now best remembered for his monumental work on the
native plants and materia medica of central Mexico. Sent
to New Spain in 1570 by King Philip II to research
and describe the natural history of the region, to assess
the medical usefulness of the natural resources, and
to gather ethnographic materials for an anthropological
history, Hernandez was the first trained scientist to
undertake scientific work in the New World. For seven
years he gathered information throughout the Valley of
Mexico, learning Nahuatl, recording local medical customs,
studying indigenous medicines, and writing down all his
observations. The result was *The Natural History of New
Spain*, written in Latin, which consisted of six folio volumes
filled with descriptions of over 3,000 plants previously
unknown in Europe (along with descriptions of a much
smaller number of animals and minerals) and ten folio
volumes of paintings by Mexican artists illustrating the
plants and animals he described.

REFERENCES: Arents: 347 (Add). • *Freilich Sale
Catalog*: no. 243. • *Hunt Botanical Catalog*: no. 247. •
LKG: XIV 892. • Nissen (BBI): no. 861. • Nissen (ZBI): no.
1908a. • NLM 17th Century Books (Krivatsy): no. 5333. •
Palau, *Manual*, 1948-77: no. 113538. • Picatoste, *Biblioteca
Científica Española*, 1891: no. 372. • Pritzel, *Thesaurus Liter-
aturæ Botanicae*, 1871-3: no. 4000. • Sabin, *Dictionary*, 1868-
1936: no. 31516.

HÉRON DE VILLEFOSSE, Antoine Marie, Baron.
(BORN: Paris, France, 21 June 1774; DIED: Normandy,
France, 6 June 1852) *French mining engineer.*

From 1801 to 1807, Héron de Villefosse was an
engineer ordinary of mines, then Napoléon appointed him
General-Inspector of all mines and manufacturing from the
Rhein to the Weichsel. As such, he moved to Clausthal
in Austria in 1809. After the restoration he became an
advisor to the new government in a number of positions.
In 1816, he was elected to the Academy of Science in Paris.

REFERENCES: ABF: I 515, 248-255. • *Nouvelle
Biographie Générale* (Hoefer). • Poggendorff: 1, cols. 1085-6.
• WBI.



DE LA RICHESSE MINÉRALE, 1819

2257. — French, 1819 [First edition].

De La | Richesse Minérale. | [wavy rule]
 | Considérations | Sur Les Mines, Usines
 Et Salines Des Différents États, | Présentées
 Comparativement, | 1.° Sous le rapport des produits
 et de l'administration, dans une première |
 division, intitulée Division Économique; | 2.° Sous
 le rapport de l'état actuel de l'art des mines
 et usines, dans une | seconde division, intitulée
 Division Technique; | (Avec un Atlas in-folio de
 65 planches.) | Par A.M. Héron De Villefosse
 | [...4 lines of titles and memberships...] | [rule] |
 [...one line of quotation, signed Tacit...] | [rule] |
 Tome Premier. | Division Economique, | Paris,
 | Se trouve chez Treuttel et Würtz, Libraires, rue de Bourbon, n.° 17;
 dans la même maison de commerce, à Strasbourg, rue des Serruriers;
 et à Londres, 30, Soho square. | [rule] | 1819.

[TITLE OF ATLAS READS:]

Atlas | De La Richesse Minérale, Recueil De
 Faits Géognostiques Et De Faits Industriels. |
 Statant l'état actuel de l'art des mines et usines,
 par des exemples authentique | rés de célèbres
 établissements, et rendus sensibles à l'œil, au moyen
 de | présentation géométrique des objets; | Par
 A.M. Héron De Villefosse, | [...3 lines of titles and

memberships...] | Longum per præcepta, breve per
 exemplum, item. | [Vingette: an underground mining
 scene] | Paris, 1819.

3 vols. [VOL 1] π^6 a-c⁴ d³ 1-74⁴ 75²; 317^{l.}; [10],
 [i]-xxix, [1], [1]-593, [3] p. Folding tables at pages 27,
 50 (2), 102 (3), 114 (4), 116, 120 (3), 129 (4), 133,
 153, 156, 168, 192, and 240. [VOL 2] π^2 a-b⁴ 1-70⁴;
 290^{l.}; [4], [i]-xvi, [1]-559, [1] p. [VOL 3] a-c⁴ 1-67⁴
 68¹; 281^{l.}; [4], [i]-xx, [1]-538 p. [Atlas] 2^o: [2] p., 65
 large engraved plates (some folding, some partly hand-
 colored and some double-page), engraved vignette of a
 mine on the title page. PAGE SIZE: Text 258 x 188
 mm.; Atlas 440 x 560 mm.

CONTENTS: [Vol 1] [2 pgs], Half title page, "De |
 La Richesse Minérale," verso blank.; [2 pgs], Title page,
 verso blank.; [1 pg], "Avis Des Libraires."; [1 pg], Blank.;
 [2 pgs], Title page, verso blank (repeated!); [1 pg], "Avis."
 (repeated!); [1 pg], Blank.; [2 pgs], Title paginated 1810.;
 [i]-xiv, "Avant Propos."; [xv]-xxix, "Table Des Matières."; [1
 pg], "Nota. Les Tableaux..."; [1]-593, Text.; [3 pgs],
 "Errata."; [At end], Large folding colored map, "Carte Du
 Royaume De Westphalie.";

[Vol 2] [2 pgs], Half title page, "De | La Richesse
 Minérale," verso blank.; [2 pgs], Title page, verso blank.;
 [i]-ii, "Avertissement."; iii-xvi, "Table Des Matières."; [1]-
 559, Text.; [1 pg], Blank.

[Vol 3] [2 pgs], Half title page, "De | La Richesse
 Minérale," verso blank.; [2 pgs], Title page, verso blank.;
 [i]-xx, "Table Des Matières."; [1]-526, Text.; 527-538,
 "Table Alphabétique."

[Atlas] [2 pgs], Title page, verso blank.; Plates 1-65.

RARE. The most significant work on the mines
 and the metallurgy at the beginning of the 19th century.
 The first volume describes the mines and the factories
 of Germany and other countries of Europe. The second,
 techniques of exploitation of the mines. The third,
 techniques of ore processing and metallurgy. A very
 large folio Atlas supplements the work. It is illustrated
 by a beautiful engraved title and 65 plates engraved by
 Weiss and Baltard and 3 double-page maps. A great
 number of these plates have extendible and moving
 parts attached. The title page of the atlas says that it
 describes the mineral richness, collection of geognostic
 and industrial facts, noting the current state of art of
 the mines and the factories. The work was begun in
 1810 and lasted for nine years.

A superbly produced atlas which belongs to Héron
 de Villefosse very scarce work 'De la richesse minérale,
 considérations sur les mines, usines, saline etc. Paris
 1810-1819. The first large double-page map has the
 following title 'Carte des pays entre l'Elbe et le Rhin
 suivant le cours du Weser, indiquant la situation des
 mines, usines, salines, carrières et autres ateliers relatifs
 à la richesse minérale; the second large double plate
 'Carte des montagnes du Hartz (Bergmännische Karte
 vom Harz)', the third large double-plate 'Carte des
 montagnes métallifères qui séparent la Saxe de la
 Bohème (Bergmännische Karte vom Erzgebirge)', the
 other plates show plans of mines, machinery etc.

Prospectus, 1811: *De la Richesse minerale, par Mr. Heron
 de Villefosse.* Extrait par M. Patrin. Paris, J.-B. Sajou,
 1811. 8^o: 44 p. Rare.

REFERENCES: BL. ● Ferchl: 231. ● LKG: XIV 5 & 6a.

2258. German transl., 1822-39: Heron de Villfosse, | [...4

HERTEL

lines of titles and memberships... | über den | Mineral=Reichtum. | [tapered rule] Betrachtungen | über | die Berg=, Hütten= und Salzwerke verschiedener Staaten, | sowohl hinsichtlich ihrer Production und Verwaltung, | als | auch des jetzigen Zustandes der Berbau= und | Hüttenkunde. | Deutsch bearbeitet | von | Carl Harmann. | [ornament] | Erster Band. | Oekonomischer Theil. | [rule] | Nebst einem Atlas mit 40 lithographirten Tafeln. | [tapered rule] | Sondershausen, 1822, | bey Berhard Friedrich Voigt.

5 vols and atlas. [VOL 1: 1822] 8°: *8 **6 1-278 282; 232ℓ.; [i]-xxvi, [2], [1]-436 p. [VOL 2: 1822] 8°: *8 **2 1-418 424; 343ℓ.; [i]-xx, [1]-663, [3] p. [VOL 3: 1822] 8°: 1-438; 344ℓ.; [1]-688 p. [VOL 4: 1839] 8°: π¹ 16 218 2-388 391 408; 320ℓ.; [i]-xiv, [1]-624, [2] p. [VOL 5: 1839] 8°: π⁶ 1-578; 462ℓ.; [i]-xii, [1]-910, [2] p. [Atlas] [4] p., 36 plates (partially colored, some folding). PAGE SIZE: Text, 202 x 120 mm.; Atlas, 425 x 272 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-viii, "Verzeichniß | der resp. Herren Subscribenten auf dieses Werk."; [ix]-xii, "Vorwort des Uebersetzers."—signed C. Hartmann, August 1822.; xiii-xiv, "Vorwort des Verfassers."; xv-xxvi, "Inhalt | des ersten Bandes."; [1 pg], Blank.; [1 pg], "Zur Nachricht."; [1], Sectional title page, "Ueber | den Mineral=Reichtum | [rule] | Oekonomischer Theil. | ..."; [2], Blank.; [3]-432, Text.; 433, "Verbesserungen im ersten Bande."; 434-436, "Bücher=Anzeigen."

[Vol 2] [i-ii], Title page, verso blank.; [iii]-xx, "Inhalt | des zweyten Bandes."; [1], Sectional title page, "Ueber | den Mineral=Reichtum | [rule] | Technischer Theil. | ..."; [2], Blank.; [3]-663, Text.; [1 pg], "Erfurt, 1822 | ..."; [1 pg], "Verbesserungen im zweyten Bande."; [1 pg], Blank.

[Vol 3] [1-2], Sectional title page, "Ueber | den Mineral=Reichtum. | ..."; [3]-688, Text.

[Vol 4] [i-ii], Blank, verso series title page.; [iii]-iv, Title page, verso blank.; [v]-viii, "Vorwort."—signed Hartmann, 24 June 1839.; ix-xiv, "Inhalt des vierten Bandes."; [1], Sectional title page.; [2], Blank.; [3]-618, Text.; [619], "Anhang."; [620], Blank.; [621]-624, Text of the supplement.; [1 pg], "Berichtigungen und Druckfehler."; [1 pg], Publisher's list.

[Vol 5] [i-ii], Blank, verso series title page.; [iii]-iv, Title page, verso blank.; [v]-xii, "Inhalt des fünften (oder zweyten Supplement=) | Bandes."; [1], Sectional title page, "Ueber | der Mineral-Reichtum. | ... | Fünfter Band. | ..."; [2], Blank.; [3]-908, Text.; [909]-910, "Nachschrift."—signed Hartmann, December 1839.; [2 pgs], Publisher's list.

[Atlas] [2 pgs], Title page, verso blank.; [2 pgs], Listing of the 36 plates.; 36 double-size plates folded at the center, partly colored.

VERY RARE. Translation by CARL HARMANN of *De La Richesse Minérale* (Paris, 1819). The rare text volumes consist of translations of Héron de Villefosse's text, together with two volumes of supplements published 1839-40. According to the register, only 117 copies of this translation were ordered in advance. The exceptional atlas illustrates the main volumes and provides extraordinary and faithful plates. These renderings show mining instruments, profiles of silver mines, mills, crushers, various steam engines, mercury distilling furnaces, etc. With the supplements 20 additional plates were prepared which are almost always missing.

REFERENCES: BL.

2259. — German, 1808.

Nouvellement des Harzgebirges mit dem Barometer. Aus dessen Papieren gezogen von L.W. Gilbert. With a profile of the Harz mountains. Halle, 1808.

8°: VERY SCARCE.

REFERENCES: LKG: XIV 179.

HERTEL, Jakob.

See: Theophilus, (*Pseudo*.) Jakob Hertel.



HESSEL

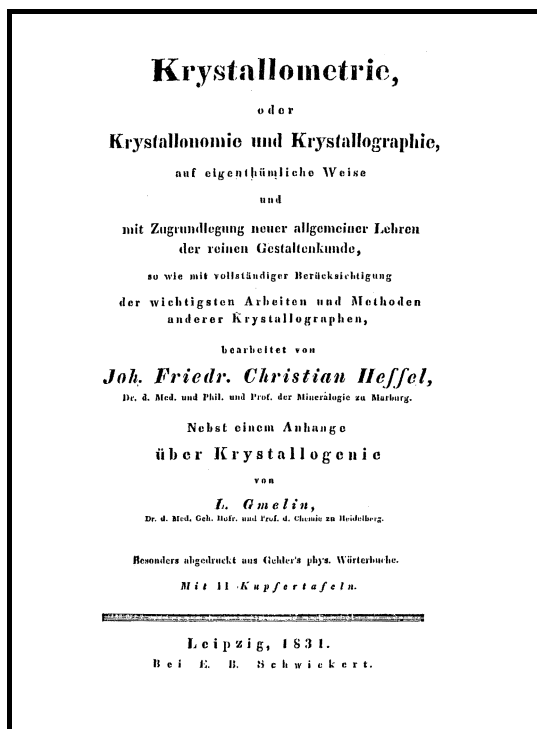
HESSEL, Johann Freidrich Christian. (BORN: Nuremburg, Germany, 27 April 1796; DIED: Marburg, Germany, 3 June 1872) *German physician, crystallographer & mineralogist.*

Hessel attended the industrial school in Nuremburg, before studying science and medicine at Erlangen and Würzburg. He received his M.D. in 1817. At the University of Munich, he continued his studies and came into contact with K.C. VON LEONHARD who convinced Hessel to become his assistant when the former took a position at the University of Heidelberg. There, Hessel developed his mineralogical skills, obtaining his Ph.D. in 1821. Then he was called to Marburg where he accepted a position as associate professor of mineralogy and mining technology. In 1825, he was appointed a full professor, a position he kept until his death. Over his career he published over 40 books and papers on a wide range of subjects, but it was not until many years after his death that the importance of the *Kristallometrie* [described below] was recognized.

REFERENCES: ADB: 12, 307. • Burckhardt, *Symmetrie der Kristalle*, 1988: p. 41. • DBA: I 529, 408-417; II 576, 189-192. • DSB: 6, 358-9 [by J.G. Burke]. • Hess, E., "J.F.C. Hessel: Zur Säcularfeier seines Geburtstag," *Neues Jahrbuch für Mineralogie*, 2 (1896), 107-22. • NDB: 9, 23 [by H. Seifert]. • Poggendorff: 1, col. 1097, 3, 626 & 4, 636. • Schürmann, K., *200 Jahre Hessisches Mineralien-Kabinet 1790-1990. Festschrift*. Marburg, 1990: 14-6. • Sohncke, L., "Die Entdeckung des Eintheilungsprincips der Krystalle durch J.F.C. Hessel," *Zeitschrift für Krystallographie*, 18 (1891), 486-98. • WBI.

2260. — German, 1831 [First separate edition].

Kristallometrie, | oder | Krystallonomie und Krystallographie, | auf eigenthümliche Weise | und | mit Zugrundlegung neuer allgemeiner Lehren | der reinen Gestaltenkunde, | so wie mit vollständiger Berücksichtigung | der wichtigsten Arbeiten und Methoden | anderer Krystallographen, | bearbeitet von | Joh. Friedr. Christian Hessel, | Dr. d. Med. und Phil. und Prof. der Mineralogie zu Marburg. |



KRISTALLOMETRIE, 1831

Nebst einem Anhang | über Krystallogenie | von | L. Gmelin, | Dr. d. Med. Geh. Hofr. und Prof. d. Chemie zu Heidelberg. | Besonders abgedruckt aus Gehler's phys. Wörterbuche. | Mit 11 Kupfertafeln. | [ornate rule] | Leipzig, 1831. | Bei E.B. Schwickert.

8°: π^9 1-21⁸ 22⁵; 182 ℓ .; [i]-xviii, [1]-346 p., folding plates XIX-XXIX showing crystal drawings all signed Anton Karcher sc. PAGE SIZE: 212 x 124 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-xiv, "Vorrede."—signed J.F.C. Hessel, July 1830.; [xv]-xviii, "Inhalt."; [1]-318, Text of Hessel's work.; 318-338, "Ueber | Krystallbildung | von L. Gmelin."; [339]-346, "Verzeichniss | der wichtigeren Verbesserungen, welche vor dem | durch lesen zu bewerkstelligen sind."; [At end], Plates XIX-XXIX.

VERY RARE. This is the first separate publication of Hessel's proof of the existence of only thirty-two symmetry crystal classes, by establishing the fact that only two-, three-, four- and sixfold axes can occur. Hessel obtained his results from an exhaustive physical analysis of the possible types of symmetry that any geometrical form might possess. It was first published as an article titled "Krystall" in *Gehler's physikalisches Wörterbuch* (Leipzig, 1830). Its importance was immediately recognized by Gehler [see note below], who arranged its publication as a separate work, and added an appendix on the formation of crystals. Unfortunately, this attention did not gain Hessel's theorem the recognition of his contemporaries, and the discovery of this fundamental principle of crystal symmetry is generally attributed

to the elegant mathematical derivation published by AUGUSTE BRAVAIS in the mid-1850's, even though the forgotten work of MORITZ LUDWIG FRANKHEIM predates both Hessel and Bravais.^[1] This is Hessel's most important scientific work and priority over Bravais was overlooked until LEONHARD SOHNCKE drew attention to its importance in 1891.^[2]

Notes: [1] M.L. Frankenheim, "Crystallonomische Aufsätze," *Isis (Jena)*, 19 (1826), 497-515 & 542-65 [Rediscovered by J.J. Burckhardt, *Die Symmetrie der Kristalle*, Basel, 1988].

[2] L. Sohncke, "Die Entdeckung des Eintheilungs-principis der Krystalle durch J.F.C. Hessel," *Zeitschrift für Krystallographie*, 18 (1891), 486-98.

L. Gehler. (BORN: ; DIED:) .

[BIOGRAPHY NEEDED]

REFERENCES: Burckhardt, *Symmetrie der Kristalle*, 1988: 31 ff.. • Dana's 7th (Bibliography): 73. • GV (1700-1910): 60, 485. • Hess, E., "J.F.C. Hessel: Zur Säcularfeier seines Geburtstag," *Neues Jahrbuch für Mineralogie*, 2 (1896), 107-22. • Sohncke, L., "Die Entdeckung des Eintheilungsprincipis der Krystalle durch J.F.C. Hessel," *Zeitschrift für Krystallographie*, 18 (1891), 486-98. (Gehler)

2261. Reprint, 1897: *Krystallometrie, | oder | Krystallonomie und Krystallographie, | auf eigenthümliche Weise und | mit Zugrundlegung neuer allgemeiner Lehren | der reinen Gestaltenkunde, | so wie mit vollständiger Berücksichtigung | der wichtigsten Arbeiten und Methoden | anderer Krystallographen, | bearbeitet von | Joh. Friedr. Christian Hessel, | Dr. d. Med. und Phil. und Prof. der Mineralogie zu Marburg. | (1830.) | [rule] | Besonders abgedruckt aus Gehler's phys. Wörterbuche. | Erstes Bändchen. | Mit 8 Tafeln. | Herausgegeben | von | E. Hess. | [ornate rule] | Leipzig | Verlag Von Wilhelm Engelmann | 1897.*

2 vols. [Vol 1] 8°: [Vol 2] 8°:

SCARCE. Edited by E. Hess [??-?]. In 1891, LEONHARD SOHNCKE rediscovered the importance of Hessel's *Krystallometrie*; however, the original 1831 publication [described above] was so difficult to obtain that Ostwald reprinted this abridged version of the text for a wider audience.

REFERENCES: Dana's 7th (Bibliography): 73.

2262. — German, 1847.

Löthrohrtabellen für mineralogische und chemische Zwecke. Marburg, Elwert, 1847.

8°: 24 p.

VERY SCARCE. Blowpipes.

2263. — German, 1862.

Ueber gewisse merkwürdige statische und mechanische Eigenschaften der Raumgebilde ... Marburg, 1862.

8°: VERY SCARCE.

REFERENCES: Burckhardt, *Symmetrie der Kristalle*, 1988: 40 ff [reproduces the title page].

HEULAND, John Henry. (BORN: 1778; DIED: Hastings, Sussex, England, 16 November 1856) *English mineral collector & dealer*.

Heuland was the nephew of the mineral dealer Jacob Forster [see note under Romé de l'Isle], whose collection he inherited. Subsequently the collection was sold to Charles Hampden Turner, that was later incorporated into Henry Ludlam's, now in the Museum of Practical Geology, London. Heuland was elected to the Geological Society of

HIÄRNE

London in 1813, becoming its foreign secretary from 1818 to 1828. The mineral "Heulandite" named for him by H.J. Brooke in 1822.

REFERENCES: Cooper, M.P., "Keeping it in the family: the Humphreys, Forsters and Heulands," *Matrix*, **9** (2001), no. 1, 3-31. • Embry, *Foreword*, 1977. • Russell, A., "John Henry Heuland," *Mineralogical Magazine*, **20** (1950), 395-405. • Sarjeant, *Geologists*, 1980: **2**, 1252. • Woodward, *History of the Geological Society*, 1907: 72, 73, 275 & 298.

2264. — Auction Catalogs, 1808-1849.

Henry Heuland's influence on mineral collecting in 19th century England was enormous. His ability to bring to market a constant flow of fine mineral specimens from all parts of the world prompted every major English collector of the time to be a regular visitor to his shop. Probably beginning in 1808, Heuland held the first of a long series of mineral specimen auction sales that would extend to the end of his career. All but one of the London sales was held in the "Great Rooms" of the auction company in King Street, Covent Garden founded around 1759 by the bookseller Samuel Paterson. These auctions would leave as a legacy a run of very rare sale catalogs that described the specimens that were for sale. A listing of the known sales is given below.

- 1808, March 16-19 & 21-32: 57 p., 700 lots sold by King & Lochée.
- [1809], from Russell (1950).
- 1812, May 4-7 & 11-14: 80 p., 1127 lots sold by Christie.
- 1815, April 24-30: 820 lots sold by King & Lochée.
- 1815, June 9-10: 44 p., 820 lots sold by King & Lochée.
- 1816, [Part I] March 25-30: 46 p., 748+9 lots sold by King.
- [Part II] April 1-5: 34 p., 600 lots sold by King.
- [Part III] April 22-27: 46 p., 816+2 lots sold by King.
- 1820, May 1-6: 39 p., 775+3 lots sold by King.
- 1821, April 30: sold by King.
- 1824, April 30-May 1, 4-5: 35 p., 602+2 lots sold by Dubois. Specimens from the collection of Marquis de Dree were included.
- 1825, November 11: 15 p., 211+78 lots sold by Thomas.
- 1826, April 10-15: 59 p., 1150+22 lots sold by Thomas. Specimens from the collection of Marquis de Dree were included.
- 1826, May 1-3: 27 p., sold by Thomas.
- 1826, July 25: from Russell (1950).
- 1829, May 4-9: 60 p., 1020 lots sold by Thomas.
- 1830, May 10-12: 37 p., 1020 lots sold by Thomas.
- 1830, May 31-June 2: 39 p., 510+3 lots sold by Thomas.
- 1831, May 2-5: 50 p., 714+1 lots sold by Thomas & Stevens.
- 1832, May 14-17: 50 p., 715 lots sold by Thomas & Stevens.
- 1833, April 29-May 4: 73 p., 1200+6 lots sold by Thomas & Stevens.
- 1834, April 14-16: 40 p., 610+3 lots sold by Thomas & Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.
- 1834, May 5-9: 56 p., 840+2 lots sold by Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.
- 1835, May 11-15: 59 p., 1002+7 lots sold by Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.

- 1836, May 2-6: 58 p., 1000 lots sold by Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.
- 1837, April 28: 10 p., 200 lots sold by Stevens.
- 1837, June 12-16: 59 p., 1002+7 lots sold by Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.
- 1837, December 11-12: 500 lots sold by Stevens.
- 1838, May 14-17: 47 p., 837+1 lots sold by Stevens. Included were specimens from the collection of the Dowager Countess of Aylesford.
- 1838, June 20: sold by Stevens.
- 1839, February 18-19: 34 p., 407+16 lots sold by Stevens.
- 1839, May 13-18: 1048 lots sold by Stevens.
- 1840, May 4-7: 630 lots.
- 1841, January 12-13.
- 1841, May 10-11: 456 lots.
- 1842, May 9-12: 821 lots. Included were specimens from Mr. Hazelwood's collection.
- 1843, May 15-17: 600 lots.
- 1844, May 13-14: 420 lots.
- 1844, July 16: 222 lots.
- 1846, February 16-17: 400 lots.
- 1846, May 18-22: 1002 lots. Gerhard Troost of Philadelphia was a major purchaser at this sale.
- 1847, May 15-16: 400 lots.
- 1847, June 14-15: 400 lots.
- 1848, April 14: 200 lots.
- 1849, June.

REFERENCES: Chalmers-Hunt, *Natural History Auctions*, 1976: 71. • Cooper, M.P., "Keeping it in the family: the Humphreys, Forsters and Heulands," *Matrix*, **9** (2001), no. 1, 3-31. • Russell, A., "John Henry Heuland," *Mineralogical Magazine*, **20** (1950), 395-405.

Description d'une Collection de Minéraux, Formée par M. Henri Heuland, et Appartenant à M. Ch. Hampden Turner, ... Par A. Lévy, ... (London, 1837-8).

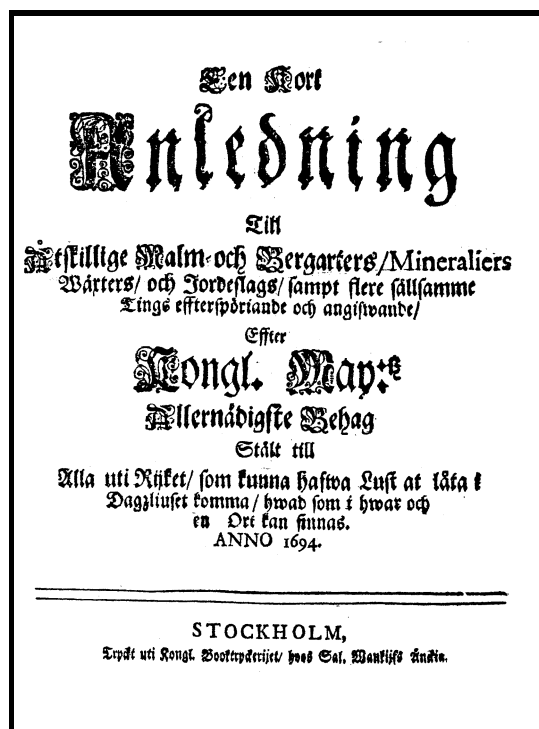
See: Lévy, Armand.

HIÄRNE (Hjärne), Urban. (BORN: Skworitz, Ingermanland, Sweden, 20 December 1641; DIED: Stockholm, Sweden, 22 March 1724) *Swedish physician & polymath.*

At the age of five, Hiärne began his studies with private tutors. He then attended in Nyen what was called a trivial school where he studied logic, rhetoric, poetry, grammar, Swedish, German, Latin, Greek, Russian and music. In 1657 he decided to study at Uppsala, and in 1658 moved to Stockholm where he was employed as a teacher. At this time, Hiärne decided to study medicine at Uppsala. To support his University education, he painted portraits, and wrote numerous poems and plays, some of which were performed. He taught himself chemistry. He completed his studies at Uppsala before 1666. He then became personal physician to the governor-general of Livland, which enabled him to study abroad in Holland, England and France. He eventually took his degree in medicine from Angers in 1670. Three years of study in Paris provided him with a good foundation in analytical and experimental chemistry. Hiärne was a dedicated Paracelsian, and his work in chemistry was directed to supporting Paracelsianism. In 1674, he settled in Stockholm, where he opened a medical practice. For a long time he was Sweden's leading authority in medicine, and his practice became very profitable.

REFERENCES: Åberg, B., "Urban Hiaerne. The first Swedish chemist," *Journal of Chemical Education*, **27** (1950), 334-7. • Akerstrom, A., "Urban Hiärne's resa till Tyskland och Holland 1667," *Lychnos*, **1937**, pp. 187-211. • Beskow, B.v., *Minne öfver Landshöfdingen, Vice Presidenten och Förste Arkiatern Urban Hjärne*. Stockholm, P.A. Norstedt & Söner, 1857. 78 p., one plate. [A biography of Hiärne.]. • DBA: I 535, 244-251. • Drugulin, *Sechstausend Portraits*,

1863: nos. 2466-8. • DSB: 6, 380-1. • Frängsmyr, *Geologi och Skapelsetro*, 1969. • Hirsch, *Biographisches Lexikon*, 1884-8: 3, 224 [by Hedenius]. • *ISIS*, 1913-65: 1, 583. • Lindroth, S., "Hjärne, Block och Paracelsus. En redogörelse för Paracelsustriden, 1708-1709," *Lychnos*, 1941, 191-229. • Lindroth, S., "Urban Hjärne and Laboratorium Chymicum," *Lychnos*, 1946-47, 51-116. • NY Academy Portrait Catalog: 3 [1 portrait listed]. • Poggendorff: 1, col. 1113. • Sarjeant, *Geologists*, Suppl. 2, 1995: 1, 722. • SBA: Scandinavian Biographical Archive: B-119, 071. • Strandberg, O., "[Contributions to the Biography of Urban Hjärne]," *Lychnos*, 1 (1936), 208-15. • *Svenskt Biografiskt Handlexikon*: 1, 502-3, portrait. • *Svenskt Biografiskt Lexikon*: 19, 141-50. • WBI. • *World Who's Who in Science*: 797.



EEN KORT ANLEDNING, 1694

2265. — Swedish, 1694 [Quarto edition].

Een Kort | Anledning | Till Åtskillige Malm= och Bergarters/Mineraliers | Wäxters/ och Jordeslags/ samt flere sällsamme | Tings efterspörjande och angifwande | Effter | Kongl. May:tz | Allernädigste Behag | Stålt till | Alla uti Rijket/ som kunna hafwa Lust at låta i | Dagzliuset komma / hwad som i hwar och | en Ort kan finnas. | Anno 1694. | [double rule] | Stockholm, | Tryckt uti Kongl. Booktryckerijet/ hoos Sal. Wankijfs Änckia.

4°: A-C⁴; 12ℓ.; no pagination or foliation. PAGE SIZE: 190 x 150 mm.

CONTENTS: A1r, Title page.; A1v-A2v, "Bewägne Läsare!"—signed Urban Hjärne.; A3r-C4v, "Förste Delen." [=text of questionnaire].

VERY RARE. An important contribution to mineralogy, which focused the activities of other Swedish researchers to the chemical analysis of minerals and mineral waters. Many subsequent naturalists considered this work to be one of the key publications setting mineralogy on a chemical foundation. The monograph describes the results of various analyses on stones and mineral waters that Hjärne performed. For example, he notes that carbon dioxide evolves from some minerals after treatment with acid. Underlying the descriptions is a classification showing elements of a traditional type. The author distinguishes seven divisions: water, earths, stones, metals, semi-metals, salts and sulphurs. Other subdivisions are noted under some of these categories including common stones, precious stones, figured stones, useful stones, and stones derived from animals.

Contents of the three "editions" above are the same, although with small differences in spellings here and there and to the layout due to the differences in page format. There is a short introduction signed Urban Hjärne (4 p. in the 8°, 3 p. in the 4° and 2 p. in the folio). "En kort anledning..." is a questionnaire in 13 short chapters, each inquiring into the local existence of different parts of the Regnum Minerale such as water, landscape, soils, rocks, common stones, useful stones, gems etc. sent out to the Swedish provinces by Hjärne. Kort Memorial is an abridged reminder of the previous since, as it states, "En kort anledning" ... hasn't met too much response ... especially not from the clergy. The intention was to publish the answers received with comments in parts corresponding to each of the 13 questions/chapters. Two parts (Hjärne used the Swedish word flockar - flocks) of these were published, *Den Korta Anledningen* (1702) and *Den Beswarade och Förklarade Anledningens* (1706), the former treating water and the latter about the earth and landscapes in general.

This work was also reprinted in the first supplement to FRANZ ERNST BRÜCKMANN's *Magnalia Dei in Locis Subterraneis* (Wolfenbüttel, 1734) [which see]. [Entry by Johan Kjellman]

REFERENCES: Beekman, *Systematische Mineralogie*, 1906. • BL: [B.229.(1.)]. • Dana's 7th (Bibliography): 73. • Frängsmyr, *Geologi och Skapelsetro*, 1969. • LKG: XII 6. • NUC: [no copy listed]. • Sallander, *Bibliotheca Walleriana*, 1955: no. 10834.

2266. Octavo edition, 1694: Een Kort | Anledning | Till | Åtskillige Malm= och Bergarters/ Mineraliers | Wäxters/ och Jordeslags/ samt flere sällsamme | Tings efterspörjande och angifwande/ | Esster | Kongl. May:tz | Allernädigste Behag | Stålt till | Alla uti Küket/ som kunna hafwa Lust at låta i | Dagzliuset komma/ hwad som i hwar och | en Ort kan finnas. | Anno 1694. | [double rule] | Stockholm, | Tryckt uti Kongl. Booktryckerijet/ hoas Sal. Wankijfs Änckia.

8°: A-B⁸; 16ℓ.; no pagination or foliation.

VERY RARE. Published simultaneously with the quarto sized edition, the content is the same as the other issue.

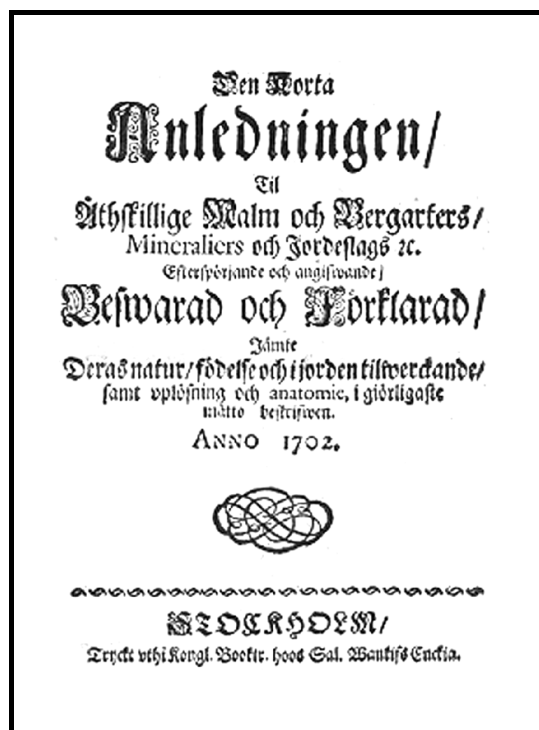
REFERENCES: BL. • Dana's 7th (Bibliography): 73. • Frängsmyr, *Geologi och Skapelsetro*, 1969. • NUC: [no copy listed]. • Sallander, *Bibliotheca Walleriana*, 1955: no. 10835.

2267. German transl., 1694: Kurtze | Anleitung | Wie man | Unterschiedliche Ertz= und Berg= ar= | ten / Mineralien

/ Gewächse / und Erd= | Sorten/ nebst mehrern seltzamen Dingen | erforschen und angeben könne. | Auff | Ihrer Kön. Maj. | Allernädigstes Belieben | An alle und jede dieses Reichs Einwoh= | ner/ welche Lust haben dasjenige/so an ei= | nem und andern Orte gefunden wer= | den kan/ ans Liecht kommen zu | lassen/ | Ausgeben Anno M DC XCIV. | [ornament] | [rule] | Stockholm/ | Gedruckt in der Königl. Buchdruckerey bey Sel. | Wankijfs hinterl. Wittwen.

8°: A-B⁸ C⁴; 20ℓ.; no pagination or foliation. VERY RARE.

REFERENCES: BL. • LKG: XII 6. • NUC: [no copy listed].



DEN KORTA ANLEDNINGEN, 1702

2268. — Swedish, 1702-6.

Den Korta | Anledningen/ | Til | Åthskillige Malm och Bergarters/ | Mineraliers och Jordeslags &c. | Efterspörjande och angifwande/ | Beswarad och Förklarad/ | Jämte | Deras natur/födelse oc i jorden tilwerckande/ | samt uplösning och anatomie, i giörligaste | måtto beskrifwen. | Anno 1702 | [ornament] | [ornate rule] | Stockholm / | Tryckt uti Kongl. Booktr. hoos Sal. Wankijfs Enckia. | af J. H. Werner.

[VERSO OF VOLUME ONE'S TITLE PAGE READS:]

Hans Kongl. May:tz högdbetrodde Man/ | Kongl. Råd/ och Öfwerste Marskalck/ | Högwälborne Her& Grefwe | Joh. Gab. Stenbock, | Grefwe och Friherre/ Herre til Siö/ | Penningeby och

Lönnarp &c. | Kongl. May:tz högdbetrodde Man/ Råd/ och | Præsident uti Kongl. Cammar och Commerce | Collegio, samt Stats Contoiret, | Högwälborne Her& Grefwe | Fabian Wrede, | Grefwe til Östanå/ Friherre til Tiöleholm/ | Herre til Fåhnö/ Häringe / Eekesiö/ | Hoffgård och Ählhult &c. | Kongl. May:tz högdbetrodde Man/ Råd/ och | Præsident uti Kongl. Bergz Collegio, | Högwälborne Her& Grefwe | Diederich Wrangel, | Grefwe och Friherre/ Herre til Biörckö &c. &c. | Hög=Gunstige Herraröch nådige Patroner.

[TITLE OF VOLUME TWO READS:]

Den | Beswarade och Förklarade | Anledningens | Andra Flock/ | Om | Jorden och Landskap | i gemeen. | [globe vignette] | Stockholm / | [decorative rule] | Anno 1702 | Tryckt af Mich. Laurelio, Anno 1706.

2 vols. [VOL 1: 1702] 4°: [8], 132 p., frontispiece (inscribed "Sola Dei placent Magnalia, cætera Sperno" and inserted after the title page in some copies), one folded plate (at p. 50, in some copies this plate occurs at p. 150 in the second part). Woodcuts on pages 99, 102, & 127-8 (2 in full-page). Two states of the first volume exist. The earliest (?) where there are vignettes on the first text leaf, the other without vignettes. [VOL 2: 1706] 4°: [4], 133-416 p., three plates (at pages 165 folded, 279 folded, 408). Woodcut illustrations on pages 173 (full-page) & 225.

RARE. Introduction is signed Urban Hiärne. In this work, which contains much topographical information, Hiärne followed the pattern of the Englishman Robert Plot's landscape descriptions and laid the foundation for a natural history of Sweden, with emphasis on geology.

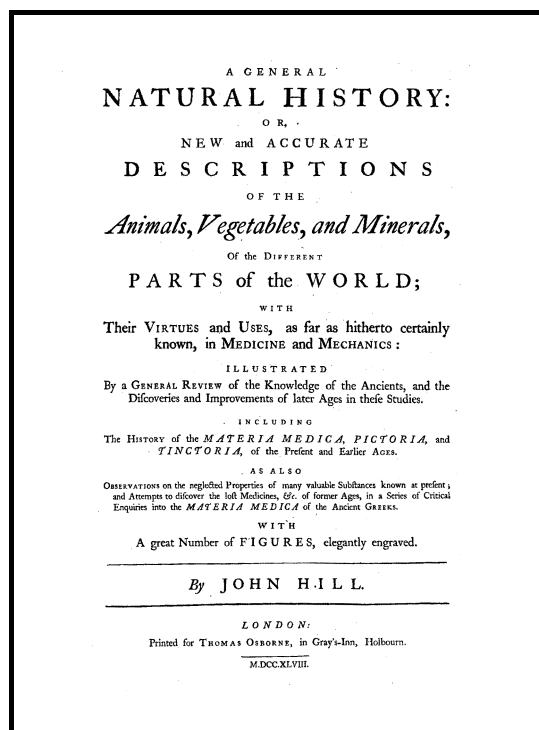
REFERENCES: BL: [457.c.33.]. • LKG: XIII 37. • NUC: [no copy listed]. • Wallerius, *Brevis Introductio*, 1779: no. 10833.

HILL, John. (BORN: Petersborough, England, c1707; DIED: London, England, 21 November 1775) *English apothecary & naturalist*.

Hill calling himself "Sir John" on account of his knighthood in the Swedish order of Vasa flourished as an apothecary and quack doctor in James Street, Covent Garden. He conducted the *British Magazine* from 1746 to 1750 and contributed articles to various other periodicals. He vigorously attacked the Royal Society, which steadfastly ignored Hill's scientific contributions. He was a prolific author of compilations and translations dealing with medicine, botany, horticulture and natural history. His most celebrated contribution was *The Vegetable System* (London, 1759-75).

REFERENCES: BBA: I 552, 245-311; 1231, 20-21. • *Catalogue of Portraits of Naturalists*: 578 [3 portraits listed]. • DNB: 9, 848-52 [by G.F.R. Barker]. • Drugulin, *Sechstausend Portraits*, 1863: nos. 2478-9. • DSB: 6, 400-1 [by P.A. Gerstner]. • *ISIS*, 1913-65: 1, 571. • Lambrecht & Quenstedt, *Catalogus*, 1938: 201. • Poggendorff: 1, col. 1104. • Rousseau, G.S., *A literary quack of London: a life of Sir John Hill*. ??, ?? • Rousseau, G.S., "The much-maligned doctor, 'Sir' John Hill (1707-1775)," *Journal of the American Medical Association*, 212 (1970), 103-8. • Sarjeant, *Geologists*, 1980: 2, 1259, Suppl. 1 (1985), 1, 493-4 & Suppl.

2 (1995), 1, 724. • WBI. • Woodruff, L.L., "The versatile Sir John Hill, M.D.," *American Naturalist*, 60 (1926), 417-42.



NATURAL HISTORY OF FOSSILS, 1748

2269. — English, 1748 [First edition].

A General | Natural History: | or, | New and Accurate | Descriptions | of the | Animals, Vegetables, and Minerals, | of the Different | Parts of the World; | with | Their Virtues and Uses, as far as hitherto certainly | known, in Medicine and Mechanics: | Illustrated | By a General Review of the Knowledge of the Ancients, and the | Discoveries and Improvements of later Ages in these Studies. | Including | The History of the Materia Medica, Pictoria, and | Tinctoria, of the Present and Earlier Ages. | As also | Observations on the neglected Properties of many valuable Substances known at present; | and Attempts to discover the lost Medicines, &c. | of former Ages, in a Series of Critical | Enquires into the Materia Medica of the Ancient Greeks. | With | a great Number of Figures, elegantly engraved. | [rule] | By John Hill. | [rule] | London: | Printed for Thomas Osborne, in Gray's-Inn, Holbourn. | [rule] | M.DCC.XLVIII.

2°: π^2 A² a² B-Z² 2A-2Z² 3A-3M² 4O-4Z² 5A-5Z² 6A-6Z² 7A-7I² 26A-26Z² 27A-27Z² 8A-8E²; 352 ℓ .; [12],

1-228, 333-592, 457-654, [6] p., folding table (facing page 1), 12 engraved plates. Pages 457 to 592 are repeated in the sequence. PAGE SIZE: 358 x 228 mm.

CONTENTS: [2 pgs], Half title page, "[rule] | A | History | of | Fossils. | By John Hill. | [rule]," verso blank; [2 pgs], Title page, verso "Contents of the Volumes. | ..."; [2 pgs], Dedication to Doctor Shaw, signed John Hill; [6 pgs], "The Preface."; Folding table.; 1-422, "The | History | Of | Fossils. | Part the First. | ... | Fossils naturally and essentially simple, not inflammable, nor soluble in water."; 423-592, 457-621, "The | History | Of | Fossils. | Part the Second. | ... | Fossils naturally and essentially compound, not inflammable nor soluble in water."; 622-637, "The | History | Of | Fossils. | Part the Third. | ... | Metallic Fossils."; 638-654, "Appendix | To The | History Of Fossils. | Of animal and vegetable substances bury'd in the earth."; [6 pgs], "Index."

PLATES: All the plates of the volume have an included description and each shows minerals, crystals or fossils. All plates except the first are signed B. Cole Sculp. The table and plates of the volume comprise: Folding table, p. 1, "Table of Fossils." Plate I, p. 110, "Talc and Fibrariae" (14 figs.). Pl. 2, p. 152, "Selenitae" (19 figs.). Pl. 3, p. 200, "Crystals" (48 figs.). Pl. 4, p. 544, "Siderochita" (23 figs.). Pl. 5, p. 621, "Pyritae" (17 figs.). Pl. 6, p. 640, "Vegetable Bodies Immers'd In Stone" (14 figs.). Pl. 7, p. 642, "Fossile Corals" (17 figs.). Pl. 8, p. 644, "Fossile Teeth, Palates, Vertebræ & Whole Fish" (+40 figs.). Pl. 9, p. 646, "Fossile Shells" (27 figs.). Pl. 10, p. 648, "Fossile Shells" (+40 figs.). Pl. 11, p. 650, "Fossile Shells" (+40 figs.). Pl. 12, p. 654, "Fossile Bodies, Once Parts of Animals" (+40 figs.).

VERY SCARCE. This is the first volume of Hill's three volume treatise, *A General Natural History*, which described nature's three realms, i.e., mineral, plant and animal. In the present work, *A History of Fossils*, minerals are divided into series, classes, orders, genera and the analog of species. They are then described according to their behavior in fire and acid, their cleavage or lack thereof, their surface texture, and their appearance under the microscope. An interesting feature of the book arises from the odd naming of the various species. Hill invented a unique nomenclature that took a mineral's distinguishing properties, and recast them into their Greek equivalents to form descriptive polysyllabic names, which is very useful if one is conversant in Greek. Unfortunately, even in Hill's time, the lay public and probably most of the scientific community were ignorant of the language, and therefore of the author's innovation. As a consequence, the valuable contributions this work made to microscopic mineral examination and to descriptive mineralogy in general had less impact on the science than they deserved.

Occasionally, a very rare copy of Hill's *History of Fossils* is found with the plates hand-colored. A note on the back of volume three's title page states, "There are a small number printed for the curious on Royal Paper; and the cuts of these are colored under the immediate inspection of the author." Exercise caution, however, when examining such copies because the plates may not have been originally colored. Sometimes the "faked" volumes can be recognized due to the whimsical colorings of the figures, but normally comparison with an authenticated copy is necessary.

REFERENCES: Freeman, *Natural Science Books in*

HILL

English, 197?: no. 1672. • *Freilich Sale Catalog*: no. 249. • Henrey, *British Botanical Literature*, 1975: no. 809. • Hoover Collection: no. 421.

2270. 3rd edition, 1773: A General Natural History: or, new and accurate descriptions of the animals, vegetables, and minerals of the different parts of the world; with their virtues and uses, as far as hitherto certainly known, in medicine and mechanics... By John Hill ... London, 1773.

8°:

VERY SCARCE. Third edition. [Does this edition have a mineralogy volume?]

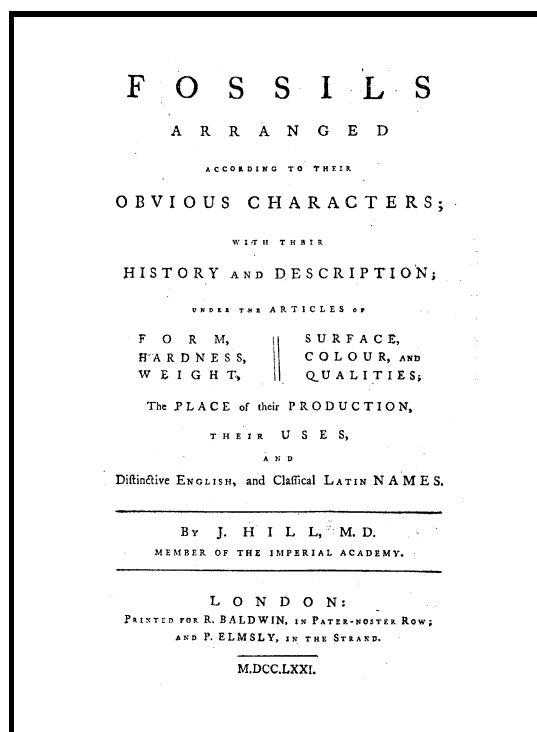
REFERENCES: Burke, *Origins of the Science of Crystals*, 1966: 26. • Cobres, *Deliciae Cobresianae*, 1782: 2, 745-35. • DSB: 6, 400-401 [by P.A. Gerstner]. • Kobell, *Geschichte der Mineralogie*, 1864: 76-77. • Lambrecht & Quenstedt, *Catalogus*, 1938: p. 74. • LKG: XII 31 & 32. • Porter, *Making of Geology*, 1980: 100.

2271. German transl., 1766: History of Fossils translated by C.F.G. Westfeld. Gothaburg, 1766.

8°:

VERY SCARCE. Not in NUC.

REFERENCES: *Berlinische Sammlungen*: 3, ?? • LKG: XII 32.



FOSSILS, 1771

2272. — English, 1771.

Fossils | Arranged | according to their | Obvious Characters; | with their | History and Description; | under the Articles of | [In two columns, separated by a double verticle rule:] Form, | Hardness, | Weight, [double verticle rule] Surface, | Color, and | Qualities; | The Place of their Production, | Their Uses, | and | Distinctive English, and Classical

Latin Names. | [rule] | By J. Hill, M.D. | Member of the Imperial Academy. | [rule] | London: | Printed for R. Baldwin, in Pater-noster Row; | and P. Elmsly, in the Strand. | [rule] | M.DCC.LXXI.

8°: [A]-F⁴ G² H-Q⁴ R⁸ S-Z⁸ 2A-2Z⁴ 3A-3H⁴ 3I²; 220ℓ.; [i]-viii, 9-51, 56-132, 133*-140*, 133-420, [16] p., one folding table (p. 122). PAGE SIZE: 212 x 128 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-viii, "Introduction."; 9-198, "Native Fossils."; 199-420, "Part II. Compound Fossils. Form'd by Mixture of Two, or more Native, Earthy Kinds."; [16 pgs], "Index."

VERY SCARCE. One of the rarer of the author's many publications in which minerals and physical properties such as hardness, color, weight, surface texture and uses are arranged in a series of tables. The large folding diagram outlines the intricate system employed to distribute the minerals. The purpose was to lay down an arrangement of minerals and fossils founded upon their obvious characteristics, such as form, hardness, weight, surface, color, localities, use, without need of chemical experiments. Hill proposed using the outward qualities of a mineral exclusively, and these were determined by sight, smell, taste and touch. The text makes heavy use of tables to organize the characteristics of each species, and it is clear that Hill did not require all features to be defined for a given mineral. For example, sulfur is said to have a distinct odor. For each species, the author has provided synonyms to Wallerius, Bomare, Linneaus and his earlier *History of Fossils* (London, 1748). In this work, Hill anticipated Werner in the use of physical characters to distinguish between mineral species; however, his text is so convoluted and irregular that it is difficult to derive a true picture of the system Hill is proposing.

REFERENCES: Dana's 7th (Bibliography): 73. • LKG: XII 33. • Sinkankas, *Gemology Bibliography*, 1993: no. 2944. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1071.

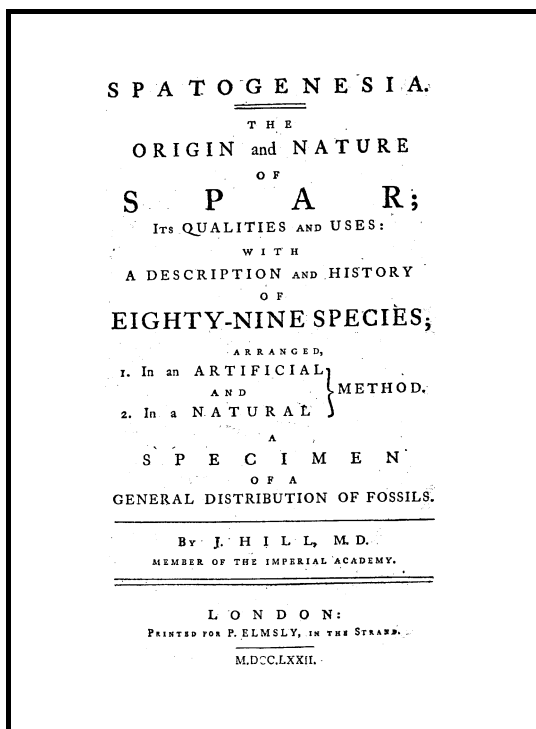
2273. — English, 1772.

Spatogensia. | [double rule] | The | Origin and Nature | of | Spar; | Its Qualities and Uses: | with | A Description and History | of | Eighty-nine Species; | Arranged, I. In an Artificial | and | 2. In a Natural | [A "}] groups items I. & 2.] Method. | A Specimen | of a | General Distribution Of Fossils. | [rule] | By J. Hill, M.D. | Member of the Imperial Academy. | [double rule] | London: | Printed for P. Elmsy, in the Strand. | [rule] | M.DCC.LXXII.

8°: π¹ B-I⁴; 33ℓ.; [2], 1-63, [1] p., one large folding table. PAGE SIZE: 210 x 115 mm.

CONTENTS: [2 pgs], Title page, verso blank.; 1-3, "Of the Origin of Spar."; 4-63, "Native Fossils. Class III. Spar."; [1 pg], Conclusions.; [At end], Folding table showing the classification of spars.

VERY RARE. A reprint with slight modifications of the section dealing with spars from the author's *Fossils Arranged According to their Obvious Characters* (London, 1771). An abstracted French translation was published as: "Spatogensie, ou traité de la nature et de la formation du spath," (*See: Journal de Physique* 3



SPATOGENSIA, 1772

(1774), pp. 209-18).

REFERENCES: LKG: IX 11.

2274. — English, 1774.

An idea of an artifical arrangement of fossils, according to unalterable characters, and superadded qualities. Also a natural method; according, to their ascent toward their greatest perfection. London, The Author, 1774.

8°: [2], 40 p.

VERY RARE. First separate edition. Originally this work appeared in Hill's translation of Theophrastus' *De Lapidibus* (1774).

REFERENCES: LKG: XII 34.

2275. — English, 1774.

Observations on the new-discovered Swedish acid; and on the stone from which it is extracted. By John Hill ... London: Printed for the author, 1774.

8°: [2], 5-16 p.

VERY RARE. First edition. Describes the mineral fluorite and its derivative, fluoric acid. Carl Wilhelm Scheele had first discovered this acid in 1771 [?].

REFERENCES: LKG: XIV 422.

2276. — English, 1785.

Enquiries into the Nature of a New Mineral Acid, discovered in Sweden, and of the Stone from which it is obtained. To which is annexed and idea of an artifical arrangement and of a natural method

of fossils, with examples in the Crystals, Spars and Earths. London: T. Trueman, 1785.

8° VERY RARE.

REFERENCES: Dawson's Pall-Mall, Bookseller: catalog entry.

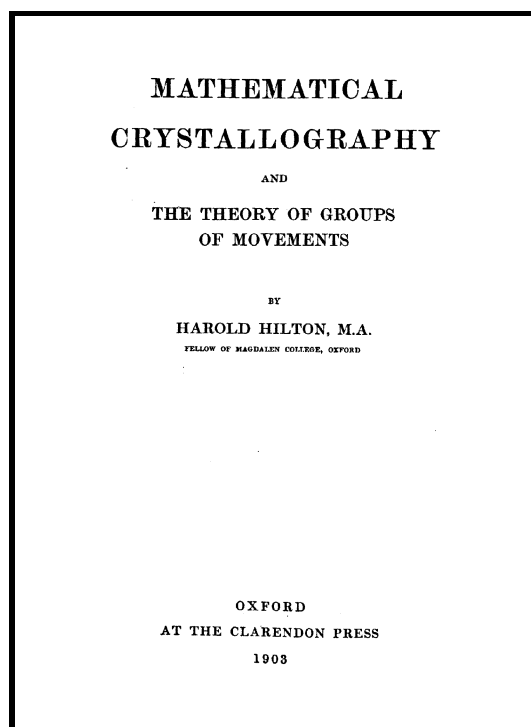
Theophrastus's History of Stones. With an English Version, and Critical and Philosophical Notes ... (London, 1746, other editions).

See: Theophrastus.

HILTON, Harold. (BORN: Ickham, Kent, England, 22 October 1876; DIED: after 1962) English mathematician & crystallographer.

From 1895 to '98, Hilton studied at Oxford, eventually receiving his D.Sc in 1913. In 1902, he became assistant lecturer in mathematics at the University of Banger, in North Wales. In 1907, he accepted a position as assistant professor of mathematics at Bedford College, London. Finally, in 1912, Hilton became professor of math at the University of London where he remained the rest of his career.

REFERENCES: BBA: I 554, 9. • Poggendorff: 5, 540-1, 6, 1123 & 7b, Teil 4, 2015. • WBI.



MATHEMATICAL CRYSTALLOGRAPHY, 1903

2277. — English, 1903.

Mathematical | Crystallography | And | The Theory Of Groups | Of Movements | By | Harold Hilton, M.A. | Fellow Of Magdalen College, Oxford | Oxford | At The Clarendon Press | 1903.

8°: π^6 B-R⁸ S² T¹; 137 ℓ .; [i]-xii, [1]-262 p., folding table, diagrams. PAGE SIZE: 218 x 142 mm.

HINTZE

CONTENTS: [i-ii], Title page, verso "Henry Frowde, M.A. | ..."; iii-iv, "Preface."—dated 16 April 1903.; v-xii, "Contents."; [1]-259, Text.; 260-262, "Index."

SCARCE. This work collects together the results of various mathematical theories of crystallography, which had not previously been published in English. Through a careful examination of their properties, Hilton was able, with minor adjustments, to derive in a simple manner the 32 point groups and the 230 space groups. However, no practical applications of the results obtained are included. Hilton provides a full account of the geometrical theory of crystal structure as outlined by Bravais, Jordan, Sohncke, Fedorov, Schoenflies and Barlow.

Contents: I. Stereographic Projection. II. Properties Common to Symmetrical and Asymmetrical Crystals. III. Symmetry. IV. Theory of Groups. V. Finite Groups of the First Sort. VI. Finite Groups of the Second Sort. VII. Coordinates of Equivalent Points. VIII. Crystal Forms. IX. Crystallographic Axes and Axial Ratios. X. Dependence of Physical Properties of Crystals of Symmetry. XI. The Growth of Crystals. XII. Structure Theory. XIII. Lattices and Translations. XIV. Symmetrical Lattices. XV. Bravais Structure Theory. XVI. Properties of Geometrical Operations. XVII. Infinite Groups of Movements. XVIII. Triclinic and Monoclinic Groups. XIX. Orthorhombic Groups. XX. Tetragonal Groups. XXI. Rhombohedral Groups. XXII. Hexagonal Groups. XXIII. Regular Groups. XXIV. Space Partitioning. XXV. Crystal Molecules. XXVI. History of the Structure Theories.

Facsimile reprint: Mathematical crystallography and the theory of groups of movements. New York, Dover Publications, [1963]. [1]-xii, [1]-262 p., diagsr.

REFERENCES: BL. • Buerger, *History of Crystal Structures*, 1990: [p. 109]. • Dana's 7th (Bibliography): 73. • NUC. • Senechal, *History of Geometrical Crystallography*, 1990: [p. 48].

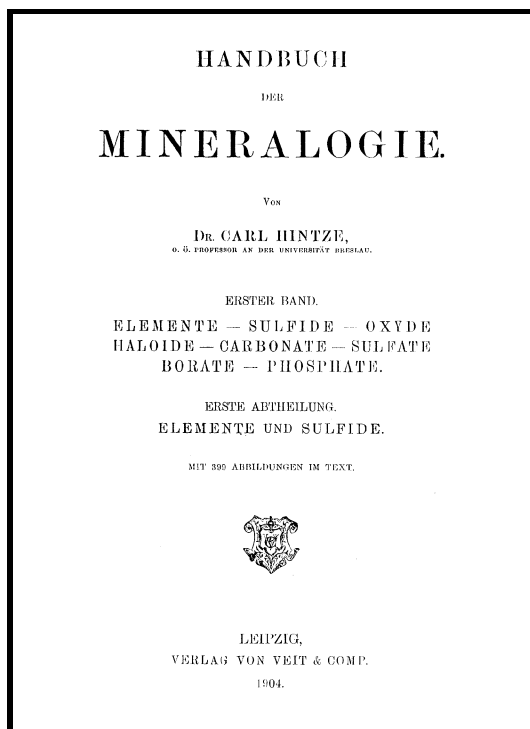
HINTZE, Carl Adolf Ferdinand. (BORN: Breslau, Germany, 17 August 1851; DIED: Breslau, Germany, 28 December 1916) *German mineralogist.*

Hintze attended the schools of Breslau before entering the city's university. In 1872 he became assistant to the crystallographer P. GROTH, then at the University of Strasbourg. In the fall of 1880, Hintze took a position as scientific consultant to the mineral dealing establishment of F.L.R. KRANTZ in Bonn. In 1884, he also accepted a position as instructor of mineralogy and crystallography at the University of Bonn. In 1886, he accepted a similar post at his alma mater, the University of Breslau. There in 1892, after the death of F. Roemer, Hintze was appointed professor ordinary and director of the *Mineralogische Instituts*. He remained in that position the remainder of his life.

REFERENCES: DBA: II 587, 202-209. • NDB: 9, 193-4 [by K.F. Chudoba]. • Poggendorff: 3, 635, 4, 644-5 & 5, 544. • Sarjeant, *Geologists*, 1980: 2, 1265-6. • WBI.

2278. — German, 1897-1933.

Handbuch | Der | Mineralogie. | Von | Dr. Carl Hintze, | O.Ö. Professor An Der Universität Breslau. | Erster Band. | Elemente — Sulfide — Oxyde | Haloide — Carbonate — Sulfate | Borate



HANDBUCH DER MINERALOGIE, 1904

— Phosphate. | Erste Abtheilung. | Elemente Und Sulfide. | Mit 399 Abbildungen Im Text. | [ornament] | Leipzig, | Verlag Von Veit & Comp. | 1904.

[TITLE PAGE OF VOLUME 1, PART 2 READS:]

Handbuch | ... | Erster Band. | ... | Zweite Abtheilung. | Oxyde Und Haloide. | Mit 275 Abbildungen Im Text. | ... | Leipzig, | Verlag Von Veit & Comp. | 1915.

[TITLE PAGE OF VOLUME 1, PART 3, 1ST HALF READS:]

Handbuch | ... | Herausgegeben | Unter Mitwirkung Zahlreicher Fachgenossen | Von | Dr. phil. nat. et Dr. rer. pol. H.C. Gottlob Linck, | ... | Erster Band | Dritte Abtheilung • Erste Hälfte | ... | Nitrate, Jodate, Karbonate, | Selenite, Tellurite, Manganite, | Plumbate | [ornament] | Berlin Und Leipzig 1930 | Walter De Gruyter & Co. | ...

[TITLE PAGE OF VOLUME 1, PART 3, 2ND HALF READS:]

Handbuch | ... | Erster Band | Dritte Abteilung • Zweite Hälfte | ... | Sulfate, Chromate, Molybdate, Wolframate, Uranate | [ornament] | Berlin Und Leipzig 1930 | ...

[TITLE PAGE OF VOLUME 1, PART 4, 1ST HALF READS:]

Handbuch | ... | Erster Band | Vierte Abteilung • Erste Hälfte | ... | Borate, Aluminate Und Ferrate. | Phosphate, Arseniate, Antimoniate, | Vanadate,

Niobate Und Tantalate | 1. Teil | ... | Berlin Und Leipzig 1933 | ...

[TITLE PAGE OF VOLUME 1, PART 4, 2ND HALF READS:]

Handbuch | ... | Erster Band | Vierte Abteilung

• Zweite Hälfte | ... | Phosphate, Arseniate, Antimoniate, | Vanadate, Niobate Und Tantalate | 2. Teil | Arsenite Und Antimonite | Organische Verbindungen | ... | Berlin Und Leipzig 1933 | ...

[TITLE PAGE OF VOLUME 2 READS:]

Handbuch | ... | Zweite Band. | Silicate Und Titanate. | Mit 632 Abbildungen Im Text. |

[ornament] | Leipzig, | Verlag Von Veit & Comp. | 1897.

2 vols. in 7 sections. [VOL 1, pt 1: 1904] 8°: [i]-vi, [1]-1208 p., 339 illus.; [VOL 1, pt 2: 1915] 8°: [i]-vi, [1209]-2674 p., 275 illus., index to volume 1, parts 1 & 2; [VOL 1, pt 3, 1st half: 1930] 8°: [2], [2675]-3656 p., 521 illus.; [VOL 1, pt 3, 2nd half: 1930] 8°: [2], [i]-viii, 3657-4565, [1] blank p., 322 illus., index to volume 1, part 3; [VOL 1, pt 4, 1st half: 1933] 8°: [i]-xii, [1]-720 p., 109 illus.; [VOL 1, pt 4, 2nd half: 1933] 8°: [2], 721-1454 p., 204 illus., index to volume 1, part 4; [VOL 2: 1897] 8°: [i]-x, [1]-1841, [1] errata p., 632 illus., index to volume 2. [VOL 1, pt 1] π^3 1-75⁸ 76⁴; 607 ℓ .; [VOL 1, pt 2] π^7 77-167⁸ 168¹; 736 ℓ .; [VOL 1, pt 3, 1st half] π^5 169-229⁸ 230¹; 494 ℓ .; [VOL 1, pt 3, 2nd half] π^4 [230]-286⁸; 460 ℓ .; [VOL 1, pt 4, 1st half] π^6 1-45⁸ 46⁴; 370 ℓ .; [VOL 1, pt 4, 2nd half] π^5 47-91⁸ 92³; 368 ℓ .; [VOL 2] π^5 1-114⁸ 115⁹; 926 ℓ . PAGE SIZE: 230 x 155 mm.

CONTENTS: [Vol 1, pt 1] [i-ii], Title page, verso blank.; [iii]-vi, "Inhalt."; [1], "Elemente."; [2], Blank.; [3]-345, Description of elemental mineral species.; [346], Blank.; [347] "Sulfide (sowie Selenide, Telluride, Arsenide, Antimonide) und Sulfosalze."; [348], Blank.; [349]-1208, Description of sulfide and sulfosal mineral species.;

[Vol 1, pt 2] [i-ii], Title page, verso "Druck von Metzger & Wittig in Leipzig."; [iii]-vi, "Inhalt."; [1209], "Oxyde und Hydroxyde."; [1210], Blank.; [1211]-2098, Descriptions of oxide and hydroxide mineral species.; [2099], "Haloide: Chloride (sowie Bromide, Jodide, Fluoride) und Oxychloride (sowie Oxyfluoride)."; [2100], Blank.; [2101]-2653, Descriptions of halide and oxychloride mineral species.; [2654]-2672, "Register zum ersten Bande. (Erste und zweite Abtheilung: Elemente, Sulfide, Oxyde, Haloide)."; [2673]-2674, "Berichtigungen. I. zum ersten Bande.";

[Vol 1, pt 3, 1st half] [2 pgs], Title page, verso "Druck von Metzger & Wittig in Leipzig."; [2675], "Nitrate und Jodate, Carbonate (und andere Kohlenstoff-Verbindungen), Selenite und Tellurite, Manganite und Plumbate."; [2676], Blank.; [2677]-3656, Descriptions of nitrate, iodate, carbonate, selenite, tellurite, manganite and plumbate mineral species.;

[Vol 1, pt 3, 2nd half] [2 pgs], Title page, verso "Druck von Metzger & Wittig in Leipzig."; [i], "Sulfate, Chromate, Molybdate, Wolframate, Uranate."; [ii], Blank.; [iii]-viii, "Inhalt."; 3657-4554, Description of sulfate, chromate, molybdate, tungstate, and uranate mineral species.; [4555]-4565, "Register zum ersten Bande. Dritte Abtheilung. Erste und zweite Hälfte."; [1 pg], Blank.;

[Vol 1, pt 4, 1st half] [i-ii], Title page, verso "Alle Rechte, insbesondere das der Übersetzung, vorbehalten."; [iii], "Borate, Aluminate und Ferrate."; [iv], Blank.; [v]-xii, "Inhalt."; [1], "Borate, Aluminate, Ferrate, Arsenite und Antimonite."; [2], Blank.; [3]-720, Descriptions of borate,

aluminate, ferrate, arsenite, and antimonide mineral species.;

[Vol 1, pt 4, 2nd half] [2 pgs], Title page, verso "Alle Rechte, insbesondere das der Übersetzung, vorbehalten."; 721-1446, Descriptions of phosphate, arsenate, antimonate, vanadate, niobate, tantalate, arsenide and antimonide mineral species, as well as organic combinations.; [1447]-1454, "Register zum ersten Bande. Vierte Abteilung. Erste und zweite Hälfte.";

[Vol 2] [i-ii], Title page, verso "Druck von Metzger & Wittig in Leipzig."; [iii]-iv, "Vorwort."; [v]-x, "Inhalt."; [1], "Silicate und Titanate."; [2], Blank.; [3]-1831, Mineral descriptions of silicates and titanates.; [1832]-1841, "Register zum zweiten Bande."; [1 pg], "Berichtigungen.";

VERY SCARCE. One of the great, monumental classics of mineralogical literature. In the first American notice of this work, Edward S. Dana prophetically wrote, "The publication of the first part of a new Descriptive Mineralogy which promises to be, when completed, the most exhaustive work ever written, is an event of no small importance to those interested in the science" [See: *American Journal of Science*, **38** (1889), 251].

No other mineralogical work has ever achieved the encyclopedic nature of Hintze's masterpiece. Individual descriptions of minerals give first the crystallographic characters, axial ratios, lists of forms, calculated angles. The physical characters and optical properties are then elaborated upon with full references to the original papers. The mineral is then given an exhaustive historical review with careful attention to its name, composition and earlier researchers. A general statement on the species occurrence follows, with a very detailed discussion of all important localities, an account of the crystals forms from each and references to the authors who have treated them. The figures of crystals are scattered through this part of the text as referred to. An account of the artificial mineral and an exhaustive list of previous analyses, including alteration products, closes the species descriptions. Seemingly, nothing is left to conjecture as there appears to be little attempt at condensing the descriptions, and this adds to the authority of the work, with many individual mineral descriptions running several pages.

The *Handbuch der Mineralogie* was published as a sequence of parts. The first section of volume two was the first to appear in 1889 with the volume finally being completed in 1897; this part describing the silicates and titanites was completely the work of Hintze. Thereafter, the sections for volume one began to make their appearance. After Hintze's death in 1916, Gottlob Linck took over the editing of volume one, parts 3 and 4, which was eventually completed in 1933. Described below are several *Ergänzungsband* which were published in an effort to keep this massive work current.

Gottlob Eduard Linck. (BORN: Oetisheim, Württemberg, Germany, 20 February 1858; DIED: Jena, Germany?, 1947) *German crystallographer*. From 1879 to 1883, Linck studied in Stuttgart, Strasbourg, and Tübingen. In 1883, he received his Ph.D. from the University of Strasbourg. In Strasbourg, he became assistant for mineralogy (1885-94), professor extraordinary (1894) and from 1894, professor ordinary in mineralogy and

HINTZE

geology at the University of Jena.

REFERENCES: Dana's 7th (Bibliography): 73. (Linck) DBA: II G 8, 55-56; 815, 14-23. • *ISIS*, 1913-65: 2, 92. • NDB: 14, 569-70 [by E. Preuß]. • Poggendorff: 4, 889, 5, 747 & 6, ?? . • WBI.

2279. Supplement 1, 1938: Handbuch | Der | Mineralogie | Von | Dr. Carl Hintze, | Geheimer Regierungsrat, | Weil. O.Ö. Professor An Der Universität Breslau | Ergänzungsband | Neue Mineralien | Herausgegeben | Unter Mitwirkung Zahlreicher Fachgenossen | Von | Dr. Dr. h.c. Gottlob Linck, | Geheimer Hofrat, | O.Ö. Professor Em. An Der Universität Jena | Mit 98 Abbildungen im Text | [ornament] | Berlin Und Leipzig 1938 | Walter De Gruyter & Co. | Vormal's G.J. Göschen'sche Verlagshandlung - J. Guttentag, Verlags- | Buchhandlung - Georg Reimer - Karl J. Trübner - Veit & Comp.

8°: [i]-iv, [1]-760 p., 98 illus. π^2 1-478 484; 382 ℓ . PAGE SIZE: 230 x 155 mm.

CONTENTS: [i-ii], Title page, verso copyright notice.; [iii]-iv, "Vorwort."; [1]-759, "Neue Mineralien (alphabetisch geordnet)."; 760, "Berichtigungen" and a list of authors to the articles.

VERY SCARCE. To insure that Hintze's *Handbuch der Mineralogie* would remain current, Gottlob Linck periodically published supplemental volumes describing all the new minerals and correcting mistakes of the former volumes. These descriptions were not nearly as comprehensive as Hintze's originals, although they did follow the same format. In this supplement nearly 800 species are arranged alphabetically.

REFERENCES: Dana's 7th (Bibliography): 73.

2280. Index, 1939: Handbuch | Der | Mineralogie | Von | Dr. Carl Hintze | [...2 lines of titles and memberships...] | Gesamtregister | Besorgt | Von | K.F. Chudoba | O. Professor An Der Universität Bonn | [ornament] | Berlin 1939 | Walter De Gruyter & Co. | Vormal's G.J. Göschen'sche Verlagshandlung - J. Guttentag, | Verlags- | buchhandlung - Georg Reimer - Kark J. Trübner Veit & Comp.

8°: π^1 [1]-48 54 54; 37 ℓ .; [2], [1]-71, [1] blank p. PAGE SIZE: 230 x 155 mm.

CONTENTS: [2 pgs], Title page, verso "Alle Rechte, besonders das der Übersetzung, vorbehalten."; [1], "Vorwort."—signed Chudoba, November 1939.; [2], Blank.; [3]-71, "Gesamtregister."; [1 pg], Blank.

VERY SCARCE. General index to volumes one and two plus the first supplement of Hintze's *Handbuch der Mineralogie*, compiled by Karl F. Chudoba [see note next entry].

REFERENCES: Dana's 7th (Bibliography): 73.

2281. Supplement 2, 1954: Handbuch | Der | Mineralogie | Von | Dr. Carl Hintze | Geheimer Regierungsrat, weil. o.ö. Professor and der Universität Breslau | Ergänzungsband II | Neue Mineralien und Neue Mineralnamen | (Mit Nachträgen, Richtigstellungen Und Ergänzungen) | Zusammengestellt und herausgegeben | von | Dr. phil. Karl F. Chudoba | ord. Prof. der Mineralogie und Petrographie | [ornament] | 1954 | Walter De Gruyter & Co. | vorm. G.J. Göschen'sche Verlagshandlung - J. Guttentag, Verlagsbuchhandlung - | Georg Reimer - Kark J. Trübner - Veit & Comp. | Berlin W35.

8°: π^6 1-408 414 42-608 613; 484 ℓ .; [i]-[xi], [1] blank, [1]-958 p., 41 illus., index. PAGE SIZE: 230 x 155 mm.

CONTENTS: [i], Blank.; [ii], Portrait and biography of Carl Hintze.; [iii-iv], Title page, verso copyright notice.; [v]-vi, "Vorwort."—signed Karl F. Chudoba, February 1954.; [vii]-viii, "Vorwort (nach Abschluss der Lieferung 12)."—signed Karl F. Chudoba, February 1960.; [ix], "Inhaltsübersicht."; [x], Blank.; [xi], "Abkürzungen."; [1 pg], Blank.; [1]-440, "Theil I."; [441]-480, "Systematische Anordnung der neuen Mineralien und neuen Mineralnamen auf kristallchemischer Grundlage."; [481]-648, "Theil II."; [649]-895, "Theil III."; [896]-917, "Unbenannte

Mineralien."; [918]-923, "Systematische Anordnung der im Theil III gekennzeichneten neuen Mineralien."; [924]-934, "Anhang."; [935], "Berichtigungen."; [936]-958, "Register."

VERY SCARCE. After the death of Gottlob Linck and a span of 16 years, the publisher's enlisted K.F. Chudoba [see note below] to write another supplement to Hintze's *Handbuch der Mineralogie*. The format has been significantly changed.

Karl Franz Johann Chudoba. (BORN: Writzow, Czechoslovakia, 10 September 1898; DIED: Bonn, Germany, 14 March 1976) *Czech mineralogist & crystallographer*. Chudoba was an assistant in the Museum of Natural History at the University of Vienna, before becoming a professor of mineralogy at the University of Freiberg-am-Breisgau (1926-8). Subsequently, he was appointed professor of mineralogy at the University of Bonn (1928-68). Chudoba applied himself principally to the study of German minerals, but also wrote a papers on the minerals of Madagascar, Brazil and Southwest Africa.

REFERENCES: Dana's 7th (Bibliography): 73. (Chudoba) *Der Aufschluss*: 27 (1976), 121-4, 3 figs [by W. Lieber]. • Fischer, W., "Prof. Dr. K.F. Chudoba 70 Jahre," *Dt. Goldschmeide-Zeitung*, 66 (1968), no. 9, 940-1. • *Fortschritter Mineralogie*: 54 (1977), no. 2, 124-40, portrait [by M.-Th. Mackowsky]. • Sarjeant, *Geologists*, 1980: 2, 723 & Suppl. 2 (1996), 1, 505.

2282. Supplement 3, 1968: Handbuch Der | Mineralogie | Von | Dr. Carl Hintze | Geheimer Regierungsrat, | Weil. O.Ö. Professor and der Universität Breslau | Ergänzungsband III | Neue Mineralien Und Neue Mineralnamen | (Mit Nachträgen, Richtigstellungen Und Ergänzungen) | Zusammengestellt Und herausgegeben Von | Dr. phil. Karl F. Chudoba | Em. Ord. Prof. Der Mineralogie Und | Petrographie Der Universität Bonn | Mit 60 Figuren | [ornament] | Walter De Gruyter & Co. | Vorm. G.J. Göschen'sche Verlagshandlung • J. Guttentag, | Verlagsbuchhandlung • Georg Reimer • Kark J. Trübner | Veit & Comp. | Berlin 1968.

8°: π^8 1'4 2-258 264 27-448 454; 356 ℓ .; [2], [i]-[xiii], [1] blank, [1]-684 p., 60 illus., index. PAGE SIZE: 230 x 155 mm. VERY SCARCE.

CONTENTS: [2 pgs], Half title page, verso blank.; [i-ii], Title page, verso copyright notice.; [iii], "Inhaltsübersicht."; [iv], Blank.; [v], "Hugo Strunz, dem erfolgreichen Meister unseres Faches."; [vi], Blank.; [vii]-viii, "Vorwort."; [ix]-xi, "Vorwort (Nach Abschluss der Lieferung 5)." [xii], Blank.; [xiii], "Abkürzungen."; [1 page], Blank.; [1]-391, "Teil I."—new minerals and mineral names, 1959-1965.; [392], Blank.; [393]-439, "Teil II."—undescribed new minerals.; [440], Blank.; [441]-462, "Teil III."—redefined minerals.; [463]-515, "Teil IV."—discredited minerals.; [516], Blank.; [517]-651, "Anhang."; [652], Blank.; [653]-673, "Systematische Anordnung der Neuen Mineralien und Neuen Mineralnamen auf Kristallchemischer Grundlage."; [674], Blank.; [675], "Berichtigungen."; [676], Blank.; [677]-684, "Register."

REFERENCES: Dana's 7th (Bibliography): 73.

2283. Supplement 4, parts 1 & 2, 1974-5: Handbuch Der | Mineralogie | Von | Dr. Carl Hintze | Geheimer Regierungsrat, | Weil. O.Ö. Professor and der Universität Breslau | Ergänzungsband IV | Neue Mineralien Und Neue Mineralnamen | (Mit Nachträgen, Richtigstellungen Und Ergänzungen) | Zusammengestellt Und herausgegeben Von | Dr. phil. Karl F. Chudoba | [... 2 lines of titles and memberships...] | Lieferung 1 [-2] | [ornament] | Walter De Gruyter & Co. | Vorm. G.J. Göschen'sche Verlagshandlung • J. Guttentag, | Verlagsbuchhandlung • Georg Reimer • Kark J. Trübner | Veit & Comp. | Berlin 1974 [-1975].

2 parts. [Part 1: 1974] 8°: [i]-[xii], [1]-162, [2] publisher's list p., formula indexes.; [Part 2: 1975] 8°: [4], [163]-373, [1] blank, illus. PAGE SIZE: 230 x 155 mm. VERY SCARCE.

CONTENTS: [Part 1] [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso copyright notice.; [v]-vi, "Vorwort."; [vii], "Inhaltsübersicht."; [viii], Blank.; [ix]-xii, "Abkürzungen."; [1]-108, "Teil I. Neue Mineralien mit vorläufiger kurzen Charakterisierung und neue Mineralnamen (1967-1973)."; [109]-149, "Teil II. Unbenannte neue Mineralien."; [150], Blank.; [151]-157, "1. Formelregister der neuen Mineralien."; [158]-160, "2. Formelregister der neuen unbenannten Mineralien."; [161]-162, "Chemisches Register der neuen unbenannten Mineralien ohne Formel."; [2 pages], Publisher's list for Walter de Gruyter.

[Part 2] [2 pgs], Title page, verso copyright notice.; [1 pg], "Inhalt."; [1 pg], Blank.; [163]-373, "Teil IV. Neue Mineralien mit ausführlicher Charakterisierung und neue Mineralnamen (1967-1974)."; [1 pg], Blank.

REFERENCES: Dana's 7th (Bibliography): 73.

HIRSCHWALD, Julius. (BORN: 1845; DIED: 1928) *German mineralogist.*

Hirschwald was professor of mineralogy and crystallography at the Technical Highschool of Berlin. His work in the area of petrology and rock examination brought his exhibit at the 1904 World's Fair in St. Louis the award of 'Grand Prix.'

2284. — German, 1875 [First edition].

Löthrohr-Tabellen. | [rule] | Ein | Leitfaden zur chemischen Untersuchung | auf trockenem Wege, | für Chemiker, Hüttenleute und Mineralogen. | Nebst einer Uebersicht über die Zusammensetzung technisch wichtiger | Minerale und Hüttenprodukte, sowie einem Schema der wichtigsten | quantitativen Löthrohrproben und deren Beschickung. | Von | Dr. J. Hirschwald, | Docent an der Königl. Gewerbe-Akademie zu Berlin. | Mit 2 colorirten Reactionstabeln. | [ornate rule] | Leipzig und Heidelberg. | C.F. Winter'sche Verlagshandlung. | 1875.

8°: [8] p., XII tables (2 colored) on [26] p., II anhang tables on [16] p., [2] p.

CONTENTS: [2 pgs], Title page, verso blank.; [1 pg], "Vorwort."—dated January 1875.; [1 pg], Blank.; [1 pg], "Inhaltsverzeichnis."; [1 pg], Blank.; [1 pg], Sectional title page, "Löthrohr-Tabellen."; [1 pg], Blank.; 12 tables.; Anhang tables.; [2 pgs], "Alphabetisches Verzeichniss."

RARE. A small work giving in a series of determinative tables useful information on the results of blowpipe analysis. It was prepared for chemists, metallurgists, and mineralogists.

REFERENCES: NUC. • NYPL Catalog.

2285. 2nd edition, 1891: Anleitung zur systematischen Löthrohr-Analyse für Chemiker, Mineralogen und Hüttenleute. Zweite, gänzlich umgearb. Aufl. der "Löthrohr-Tabellen." Leipzig, C.F. Winter'sche Verlagshandlung, 1891.

8°: 128 p., illus. A much expanded edition, giving tables of blowpipe analysis. VERY SCARCE.

3rd edition, 1920: Anleitung zur pyrochemischen analyse für chemiker, mineralogen und hüttenleute. 3. verb. aufl. der Systematischen löthrohranalyse. Mit e. kol. reaktionstaf und in der text eingedr. holschen. Berlin, G. Borntraeger, 1920. 8°: iii, 122 p., ill., plates, tables.

REFERENCES: NUC.

2286. — German, 1885 [Collection catalog].

[Continued within a single rule box:] Das | Mineralogische Museum | der | Königlichen

Technischen Hochschule Berlin. | [rule] | Ein Beitrag zur topographischen Mineralogie, sowie ein Leitfaden | zum Studium der Sammlungen, | von | Dr. Julius Hirschwald, | [...2 lines of titles and memberships...] | [rule] | Berlin. | Verlag von R. Friedländer & Sohn. | 1885.

8°: [i]-xvii, [1], [1]-242, [2] p., one floor plan, 2 text illus.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-v, "Vorwort."; [vi], "Inhalt."; [vii]-xvii, "Allgemeine Methodik und specielle Einrichtung | der mineralogischen Sammlung."; [1 pg], Blank.; [1]-235, "Text."; [236], "Verbesserungen und Zusätze."; [237]-242, "Register."; [1 pg], Advertisement.; [1 pg], Blank.; [At end], One folding floor plan.

VERY SCARCE. A catalog of the the mineral collection at the Technical Highschool of Berlin, where Hirschwald was an instructor. In the text, the author takes the opportunity to also include information on topographical mineralogy.

REFERENCES: NDB: 9, 233. • Poggendorff: 4, 646.

HIRT, Ferdinand. (BORN: 1810; DIED: 1879) *German bookseller & publisher.*

REFERENCES: ADB. • DBA: I 543, 339-342; II 590, 211. • NDB. • WBI.

2287. — German, 1848-9.

Atlas des Mineralreichs. Breslau, Verlag von Ferdinand Hirt, 1848-49.

8°: iv, 144 p., frontispiece, many text woodcuts. VERY SCARCE.

REFERENCES: The Gemmary Catalog, Bookseller: cat. 18, no. 430. • NUC. • USGS Library Catalog.

HISINGER, Wilhelm. (BORN: Skinnskatteberg, Västmanland, Sweden, 22 December 1766; DIED: Skinnskatteberg, Västmanland, Sweden, 28 June 1852) *Swedish mineralogist, chemist, geologist & palaeontologist.*

Hisinger was a wealthy landowner and proprietor of a foundry, and for amusement, he worked privately as a scientist. In 1803, together with J.J. BERZELIUS he is credited with the discovery of the element cerium. Hisinger researched the electrolysis of salts and found the amount of decomposition proportional to affinity of compound components and to surface contact with the conductor. The extensive mineralogical and geological collections he accumulated during his lifetime were bequeathed to the Swedish Natural History Museum in Stockholm.

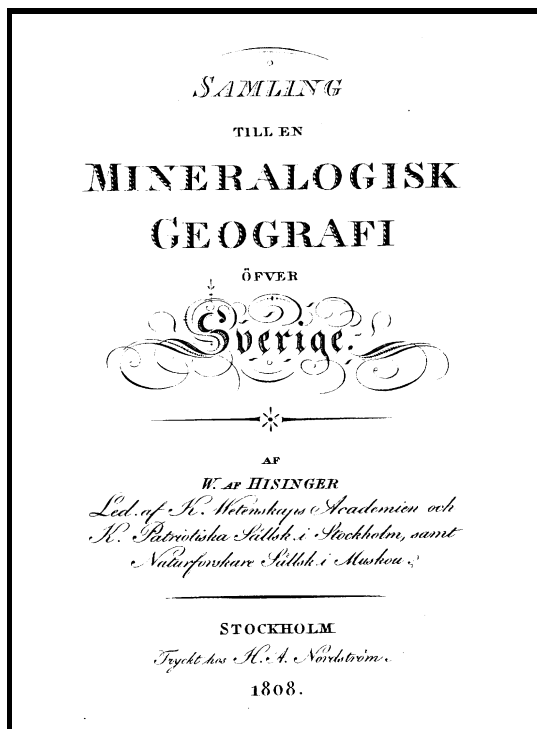
REFERENCES: Barr, *Index to Biographical Fragments*, 1973: 123. • *Biographiskt Lexicon*. • Cleavelly, *World Palaeontological Collections*, 1983: 152. • DSB: 6, 436-7 [by G. Regnéll]. • Heijenskjöld, C., "Wilhelm Hisinger. Bidrag till hans levnadsteckning," *Me Hammare och Fackla*, Stockholm, 6 (1934), 56-72. • *ISIS*, 1913-65: 1, 583. • Kongl. Svenska Vetenskaps Academiens Handlingar: 1854, 385-91. • Lambrecht & Quenstedt, *Catalogus*, 1938: 202-3. • Poggendorff: 1, cols. 1111-2. • Regnéll, G., "Wilhelm Hisinger, geologist (1766-1852)," *Striae*, 31 (1990), 17-24. [*Uppsala Stud. Hist. Sci.*, no. 8.]. • Sarjeant, *Geologists*, 1980: 2, 1267 & Suppl. 2 (1995), 1, 726. • SBA: Scandinavian Biographical Archive: B-119, 053. • *Svenskt Biografiskt Handlexikon*: 1, 500, portrait. • *Svenskt Biografiskt Lexikon*: 19, 97-100. • WBI.

2288. — Swedish, 1790.

Samling till en Minerographie öfver Sverige, af W. af Hisinger. Stockholm, Tryckt hos Johan A. Carlbohm, 1790.

8°: 216 p. An early topographical work describing the mineral resources of Sweden. EXTREMELY RARE.

REFERENCES: *Allgemeine Literatur-Zeitung*: 1791, no. 2, 142. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 170. • LKG: XIV 807. • NUC: [no copy listed]. • SWIM.



SAMLING TILL EN MINERALOGISK GEOGRAFI, 1808

2289. 2nd edition, 1808: [Ornate rule] | Samling | Till En | Mineralogisk | Geografi | Öfver | Sverige. | [ornate rule] | Af | W. af Hisinger | [...3 lines of titles and memberships...] | [tapered rule] | Stockholm | Tryckt hos H.A. Nordström, | 1808.

8°: π¹ * 10 A-R⁸ S6; 153L.; [2], [I]-XX, [1]-276, [8] p., 5 plates (3 folding). PAGE SIZE: 212 x 138 mm.

CONTENTS: [2 pgs], Engraved title page, verso blank.; [I]-II, "Til Läsaren."; [III]-XX, "Inledning."; [1]-276, Text.; [7 pgs], "Register öfver Orternas Namn."; [1 pg], "Rättelser och Tilläggningar."

SCARCE. An early and important work on the geology of Sweden. Zittel writes that "this work contains a historical review of all the facts known of Swedish rocks up to that date, and applied Werner's systematic arrangement." After a general introduction, with descriptions of the most common rock-types and their geographical distribution, the text starts with separate chapters each covering a province of Sweden (the north is not treated). The general petrography is followed by short descriptions of the mines known to the region and their minerals. Provinces covered are Dalarne, Vestmanland, Upland, Södermanland, Nerike, Vermeland, Dahlsland, Vestergöthland, Östergöthland, Småland, Skåne

and Gottland. The plates show a cross-section and various maps of the Swedish country. [Entry by Johan Kjellman]

REFERENCES: Dana's 7th (Bibliography): 73. • LKG: XIV 808a. • Zittel, *History of Geology*, 1901: p. 117.

2290. 3rd edition, 1843: Handbok | för | Mineraloger | under resor | i | Sverige | [ornate rule] | [ornate rule] | Stockholm, 1843. | P. A. Norstedt & söner, | Kongl. Boktrykare.

8°: π³ 1-11⁸ 12⁴ 13²; 97L.; [i]-vi, [1]-188 p.

CONTENTS: [i-ii], Titlepage, verso blank.; [iv]-vi, Foreword signed Stockholm, Februari 1843. W. Hisinger.; [1]-188, Text.

VERY SCARCE. This edition is to an extent an entirely new work as the author has expunged all non-mineralogical information. It is outlayed as a rough itinerary for travelling mineralogists, covering the (at the time) mineralogically most interesting mines. [Entry by Johan Kjellman]

REFERENCES: NUC. • SWIM.

2291. German transl., 1819: Versuch | einer | mineralogischen Geographie | von | Schweden, | von | W. Hisinger. | [ornate rule] | Uebersetzt und mit Erläuterungen | und Zusätzen versehen. | K.A. Blöde. | [tapered rule] | Mit einem Kupfer. | [ornate rule] | Freyberg, | bey Craz und Gerlach. | 1819.

8°: xii, 567, [1] p., one folding plate (colored; showing cross-sections). PAGE SIZE: 174 x 90 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to J.J. Berzelius, F.J.L. Hausmann and W. Hisinger, signed the translator.; [iv], Blank.; [v]-xii, "Vorrede."—signed K.A. Blöde, 5 May 1819.; [1]-24, "Einleitung."; [25]-103, "Dalarne oder Dalekarlien."; 104-160, "Westmanland."; 161-185, "Upland."; 186-203, "Södermanland."; 204-216, "Nerike."; 217-242, "Wermeland."; 243-250, "Dahlsland."; 251-269, "Westgothland."; 270-288, "Östgothland."; 289-306, "Småland."; 307-323, "Schonen (Skåne)."; 324-328, "Öland."; 329-336, "Gottland."; [337]-448, "Anmerkungen."; [449]-478, "Erster Anhang. | [rule] | Uebersicht der bekannten geog- | nostischen Verhältnisse | Schwedens, | von Hisinger."; [479]-529, "Zweyter Anhang. | ... | Untersuchung einiger in der Ge- | gend um Fahlun gefundenen Fossi- | lien und ihrer Lagerstätten, von J. | G. Gahn, Jac. Berzelius, C. Wall- | mann und H.P. Egerz."; [530], "Berichtigungen in Hinsicht der beygefügten An- | merkungen und Zusätze."; [531]-567, "Sachregister."; [1 pg], "Noch einige Berichtigungen."; [At end], One folding colored plate showing cross sections.

VERY SCARCE. Translation by Karl August Blöde from *Samling till en Minerographie öfver Sverige* (Stockholm, 1808).

Karl August Blöde. (BORN: Freiberg, Saxony, Germany, 14 August 1773; DIED: 1820) *German financial advisor & naturalist.* Blöde authored an obituary of ABRAHAM GOTTLÖB WERNER.

2292. German transl., 1826: W. Hisinger's | Versuch einer | mineralogischen | Geographie | von | Schweden. | [tapered rule] | Umgearbeitete und vermehrte Auflage. | [rule] | Aus der Handschrift übersetzt | von | F. Wöhler. | [tapered rule] | Leipzig, 1826 | Verlag von Johann Ambrosius Barth.

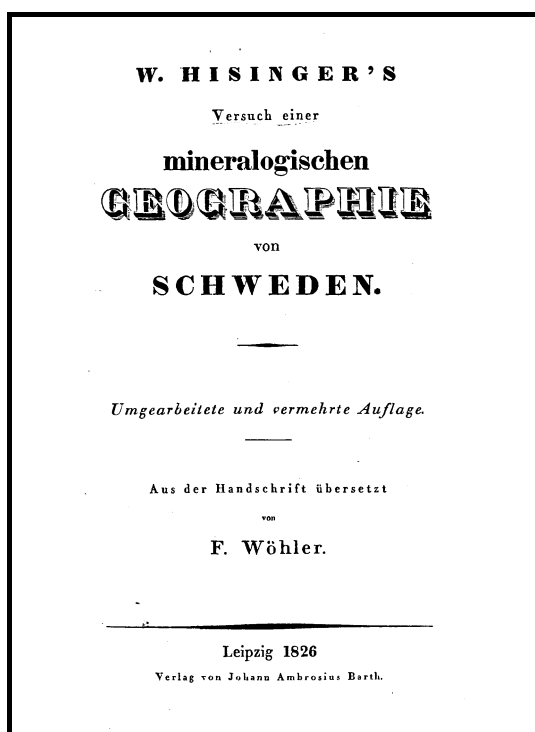
8°: vi, 250 p.

VERY SCARCE. Translated by the noted chemist FRIEDRICH WÖHLER, this is the second revised and expanded German version of *Samling till en Mineralogisk Geografi öfver Sverige* (Stockholm, 1808).

REFERENCES: Dana's 7th (Bibliography): 74. • DSB: 6, 436. • LKG: XIV 807.

2293. — Swedish, 1841.

Förteckning | öfver en | geognostisk och petrefactologisk samling | från | Sverige och Norrige, | tillägnad | Kongl. Vetenskaps-Academien | af | en dess ledamot. | [ornate rule]



VERSUCH, 1826

| Stockholm, 1841. | Tryckt hos P.A. Norstedt & söner, Kongl. Boktryckare.

8°: π^2 [1]-6⁴; 26^l.; [4], [1]-44, [47-48], 45-[46] p.

CONTENTS: [2 pgs], Titlepage, verso blank.; [2 pgs], "Annälan" (presentation), verso blank.; [1-2], "Geognostisk Samling", verso blank.; [3]-44, Petrologic tables.; [47-48], summary, addenda.; 45-[46], "Större stycken", verso blank.

RARE. Catalogue over a petrologic collection for Sweden and Norway with references to the articles wherein the rock-types are originally described. [Entry by Johan Kjellman]

REFERENCES: NUC. • SWIM.

HITCHCOCK, Edward. (BORN: Deerfield, Massachusetts, U.S.A., 23 May 1793; DIED: Amherst, Massachusetts, U.S.A., 27 February 1864) *American geologist.*

Hitchcock was educated as a clergyman, and from 1824 to 1845 he was professor of natural history and chemistry at Amherst College, becoming president of the institution from 1845 to 1855. He then took an appointment as professor of geology from 1855 to 1864. At various times he was the State Geologist of Massachusetts and Vermont. He is best remembered for his work on glacial drift and the fossil footprints of the Connecticut Valley.

REFERENCES: *American Geologist*: 16 (18??), 133-49, biblio., portrait. • *American Journal of Science*: 37 (1864), 302-4. • *Annals of the National Academy of Science*: 1866 (1867), 127-54. • *Catalogue of Portraits of Naturalists*: 583 [1 portrait listed]. • Cleavelly, *World Palaeontological Collections*, 1983: p. 152. • DAB: 5, 71-2. • DSB: 6, 437-8. • Hitchcock, E., *Reminiscences of Amherst college, historical, scientific, biographical and autobiographical: also, of other and wider life experiences.* With four plates and a geological

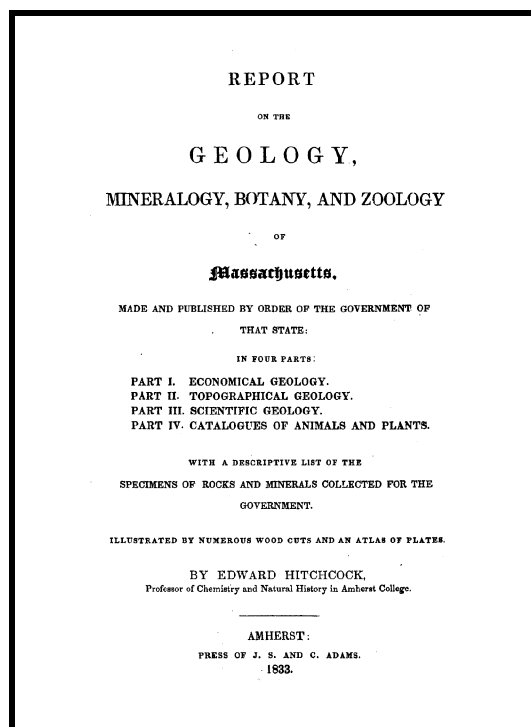
map. Northampton, Mass., Bridgman & Childs, 1863. vii, [1], 412 p. front. (port.) 3 pl., fold. map.. • *Isis*: 63 (1972), 529-43. • Poggendorff: 1, cols. 1112-3 & 1573-4. • *Quarterly Journal of Geological Society of London*: 21 (1865), 50-1. • Sarjeant, *Geologists*, 1980: 2, p. 1267-8. • Wilson, *Benjamin Silliman and his circle*, 1979.

2294. — English, 1823.

A sketch of the geology, mineralogy and topography of the Connecticut; with a map and drawings, and occasional botanical notices. (From the American journal of Science.) To which is added, a discourse on the utility of natural history. ... New Haven [Conn.]: S. Converse, publisher. 1823.

8°: [iii]-iv, [1], 2-154p. 4 plates (2 fold.) p., illus., map. VERY SCARCE.

REFERENCES: Rink, *Technical Americana*, 1981: no. 791. • Sabin, *Dictionary*, 1868-1936: no. 12837.



REPORT ON THE GEOLOGY, 1833

2295. — English, 1833 [First edition].

Report | On The | Geology, | Mineralogy, Botany And Zoology | Of | Massachusetts. | Made And Published By Order Of the Government Of | That State: | In Four Parts: | Part I. Economical Geology. | Part II. Topographical Geology. | Part III. Scientific Geology. | Part IV. Catalogues Of Animals And Plants. | With A Descriptive List Of The | Specimens Of Rocks And Minerals Collected For The | Government. | Illustrated By Numerous

HLAWATSCH

Wood Cuts And An Atlas Of Plates. | By Edward Hitchcock, | Professor of Chemistry and Natural History in Amherst College. | [rule] | Amherst: | Press Of J.S. and C. Adams. | 1833.

8°: [i]-xii, [1]-692 p.

CONTENTS: [i-ii], Title page, verso blank.; [iii]-v, "Introductory Or Historical Note."; [vi]-xii, "Contents."; [1]-652, Text.; 653-678, Appendix, "Catalogue of Specimens in the Government Collection of Rocks and Minerals."; 679-692, Index.

SCARCE. This is the first report prepared by Hitchcock of the geology, mineralogy, botany and zoology of Massachusetts. The text is divided into four parts with the (I) Economical Geology taking pages 1-72, followed by (II) Topographical Geology (pp. 73-110), (III) Scientific Geology (pp. 111-542) and (IV) Catalogues of the Animals and Plants on pages 543-652. Throughout the text there are numerous references to the minerals and mineral deposits found within the state. It was followed by several other publications on the subject [which see entries below].

The "Atlas of Plates" referred to on the title page almost never accompanies the text volume. It appears to have consisted of a few pages of text together with a large 240 x 300 mm. folding colored(?) map of the state of Massachusetts.

REFERENCES: NUC: ??, ?? [NH ??????????].

2296. 2nd edition, 1835: Report | On The | Geology, | Mineralogy, Botany And Zoology | Of | Massachusetts. | Made And Published By Order Of the Government Of | That State: | In Four Parts: | Part I. Economical Geology. | Part II. Topographical Geology. | Part III. Scientific Geology. | Part IV. Catalogues Of Animals And Plants. | With A Descriptive List Of The | Specimens Of Rocks And Minerals Collected For The Government. | Illustrated By Numerous Wood Cuts And An Atlas Of Plates. | Second Edition, Corrected And Enlarged. | By Edward Hitchcock, | [...3 lines of titles and memberships...] | [rule] | Amherst: | Published By J.S. And C. Adams. | 1835.

[Text] 8°: [1]-702 p. [Atlas] 4°: 19 p., one folding map (240 x 300 mm. of the State of Massachusetts).

VERY SCARCE. Second slightly enlarged edition of the 1833 text. Again the Atlas called for on the title page is a very seldom encountered book.

REFERENCES: NUC: ??, ?? [NH ??????????].

2297. — English, 1838.

Report | On A | Re-Examination | Of The | Economical Geology | Of | Massachusetts. | [rule] | By Edward Hitchcock, | Professor Of Chemistry And Natural History In Amherst College. | [rule] | Boston: | Dutton And Wentworth, State Printers. | | 1838.

8°: [1]-139, [1] p.

CONTENTS: [1]-2, Title page, verso blank.; [3]-4, "Contents."; [5]-139, Text, signed Edward Hitchcock, 1 April 1838 on page 139.; [1 pg], Blank.

VERY SCARCE. Describes the soils, marls, clays, limestone, sands, salt, lime, fossil fuels, metallic ores including magnetite, chromite, galena, and sphalerite, feldspars, slate and serpentine found in the boundaries of the state of Massachusetts.

REFERENCES: NUC: ??, ?? [NH ??????????].

2298. — English, 1841.

Final Report | On The | Geology Of Massachusetts: | Vol. I. | Containin | I. Economical Geology. | II. Scenographical Geology. | By Edward Hitchcock, LL. D. | [...2 lines of titles and memberships...] | [wavy rule] | Northampton: | Published By J.H. Butler | 1841.

[TITLE OF VOLUME TWO READS:]

Final Report | ... | III. Scientific Geology. | IV. Elementary Geology. | ...

2 vols. [VOL 1] 8°: [i]-xii, 1a-11a, [1], [13]-299, [1] p., 14 plates. [VOL 2] 8°: [2], [300]-831, [1] p., 41 leaves of plates (some folded), illus.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank.; [iii]-iv, Dedication.; [v]-vii, "Introduction—History of the Survey."; [viii]-x, "Contents."; xi-xii, "Explanation of the Plates."; [1a]-11a, "Postscript."; [1 pg], Blank.; [13]-225, Text (part I).; [226], Blank.; [227-299, Text (part II).; [At end], 14 plates (one folding) showing scenes of Massachusetts.

[Vol 2] [2 pgs], Title page, verso blank.; [300]-714, Text (part III).; [715]-800, Text (part IV).; [901]-825, "Appendix | A Catalogue of Specimens of Rocks and Minerals | Illustrating the Report of a Geological | Survey of Massachusetts."; [826], Blank.; [827]-831, "Index."; [1 pg], Blank.; [At end], 41 plates.

VERY SCARCE. This is Hitchcock's final report of the his survey of the geology and mineralogy of Massachusetts, first published in 1833.

REFERENCES: NUC: ??, ?? [NH ??????????].

2299. — English, 1861.

Report on the Geology of Vermont. Descriptive, theoretical, economical and scenographical ... In Two Volumes. Claremont, N.H., Claremont Manufacturing Co., 1861.

2 vols. [VOL 1] 8°: viii, 9-558 p., 289 illus. [VOL 2] 8°: [6], 559-988 p., illus. 290-365, 38 plates, including a hand-colored geological map of Vermont, cross-sections, views, etc.

VERY RARE. A famous book noted for its fine illustrations and accurate text. The hand-colored map showing the geology of Vermont is the first of the state. The work was printed in a small edition, however. Only 30 copies were given to private individuals and some others to State Colleges making this set a scarce item, and perhaps Hitchcock's rarest publication.

REFERENCES: Merrill, *First One Hundred Years*, 1924: p. 469-70.

HLAWATSCH, Carl. (BORN: 1870; DIED:) *Austrian mineralogist.*

Hlawatsch was a docent at the Vienna mineralogical museum. He wrote many papers on mineralogical and crystallographic subjects, and was particularly interested in the crystal form of the California mineral, Benitoite.

2300. — German, 1910-1.

Bibliothekskatalog | der | mineralogische-petrographischen Abteilung | des | k.k. Naturalhistorischen Hofmuseums in Wien | Im Auftrage der Direktion bearbeitet von C.

Hlawatsch. | Nach dem Stande vom 31. Dezember 1909. [Vienna, 1910-11.]

2 parts. [Part 1: 1910] 8°: [1]-192 p. (A-Meinecke). [Part 2: 1911] 8°: [1]-142 p. (Meinecke-Z).

VERY SCARCE. Originally published in two parts in the *Ann. Nat. Hist. Hofmuseums, Wien* [See the article listings below] this catalog appears to have had a few copies bound and issued as a separate book. It is an author catalog of the items contained in the large mineralogical library of the Hofmuseum in Vienna through 1909. Several thousand titles of books and articles are listed with (unfortunately) no paginations and no indexes.

Original articles: This bibliography first appeared as two articles: "Bibliothekskatalog der mineralogisch-petrographischen Abteilung des k.k. Naturhistorischen Hofmuseums in Wien. I. Einzelwerke und Sonderabdrücke [1. Teil]," *Ann Nat Hist Hofmuseum. Wien*, 24 (1910/11), 1-192.

"Bibliothekskatalog der mineralogisch-petrographischen Abteilung des k.k. Naturhistorischen Hofmuseums in Wien. II. Fortsetzung und Nachtrag [2. Teil]," *Ann Nat Hist Hofmuseum. Wien*, 25 (1911), 1-141.

REFERENCES: BL.

HOCH, Franz Ulrich Theodosius.

See: Aepinus (hoch), Franz Ulrich Theodosius.



CHEMISCHE MINERALOGIE, 1792

HOCHHEIMER, Karl Friedrich August (*pseudo Johann Daniel Hock*). (BORN: Kirchberg in Saxony, Germany, 21 December 1749; DIED: after 1825) *German physician*.

REFERENCES: DBA: I 545, 208-217, 546, 19-20. • Hamberger & Meusel, *Gelehrte Teutschland*, 1796-1834. • Poggendorff: 1, cols. 1116-7. • WBI.

2301. — German, 1792-3.

Chemische | Mineralogie, | oder | vollständige Geschichte | der | analytischen Untersuchung | der Fossilien, | von | Carl Friedrich August Hochheimer. | [ornate rule] | Erster Band, | welcher die Untersuchung der unmetallischen Fossilien enthält. | [ornate rule] | Leipzig, 1792 | bey Johann Ambrosius Barth.

2 vols. [VOL 1: 1792] 8°: [VOL 2: 1793] 8°: An early study of the chemistry of mineralogy, including much information on the analytical techniques used by the author in his examinations. RARE.

REFERENCES: BL: [971.h.6.]. • *Katalog Bergakademie Freiberg*, 1879: p. 303 [IV. 640 a.b.]. • LKG: XI 18. • NUC: [no copy listed].

2302. — German, 1794.

Versuch einer mineralogischen Nomenklatur, oder Vorschläge zu einer solchen Benennung der Fossilien, die nicht nur die chemischen Bestandtheile, sondern auch das Verhältniss derselben gegen einander in einem jeden Fossile mit einem einzigen Worte ausdrückt, mithin zugleich anzeigt, unter welche Klasse, Geschlecht, Gattung und Art ein jedes Fossil gehört, nebst einer neuen systematischen Ordnung der Fossilien. Leipzig, 1794.

8°: viii, 118 p. VERY SCARCE.

REFERENCES: BL: [972.g.32.]. • LKG: VII 1. • NUC: [no copy listed].

HOEFER, Ferdinand. (BORN: 1811; DIED: 1878) *French naturalist*.

REFERENCES: DBA: II 594, 374. • NDB. • WBI.

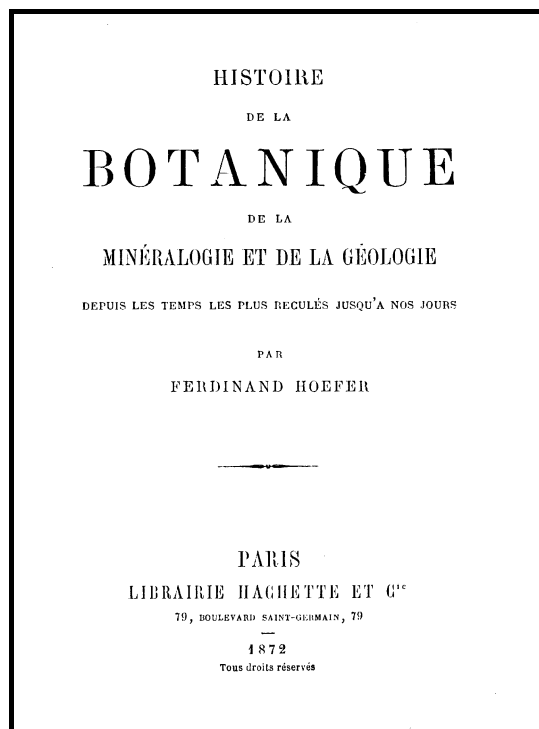
2303. — French, 1872 [First edition].

Historie | De La | Botanique | De La | Minéralogie Et De La Géologie | Depuis Les Temps Les Plus Reculés Jusqu'à Nos Jours | Par | Ferdinand Hofer | [ornate rule] | Paris | Libraire Hachette Et Cie | 79, Boulevard Saint-Germain, 79 | [rule] | 1872 | Tous droits réservés.

8°: π^2 1-258 266; 208 ℓ .; [4], [1]-411, [1] p. PAGE SIZE: 180 x 115 mm.

CONTENTS: [2 pgs], Series title page, "Histoire | Universelle | Publiée | par une société de professeurs et de savants | Sous La Direction | De V. Duruy | [rule] | Histoire | De La | Botanique | De La | Minéralogie Et De La Géologie," verso "Ouvrages De M. Hofer | ..."; [2 pgs], Title page, verso blank.; [1]-408, Text. [409]-411, "Table Des Matières."; [1 pg], "12402.—Paris, Typographie Lahure | Rue de Fleurus, 9."

VERY SCARCE. A derivative history of botany, mineralogy and geology, published as one volume in a general series of books detailing the history of science. The first portion (pages 1-287) is a history of botany, from antiquity through the modern age. The history



HISTOIRE DE LA BOTANIQUE, 1872

of mineralogy is covered in the section (pages 288-356). It describes the precious stones known to the ancients, the first theories of fossils, history of research on igneous rocks, the story of topographical mineralogy, meteorites, and discoveries in crystallography. The final section details the evolution of geology (pages 357-408). It gives the story by looking at the geological theories of Burnet, Whiston, Woodward, Steno, Leibnitz, and Buffon. Other sections describe volcanism, neptunism, Werner's theories, theory of metamorphism, and the rise of modern paleontology.

2304. 2nd edition, 1882: Histoire | De La | Botanique | De La | Minéralogie Et De La Géologie | Depuis Les Temps Les Plus Reculés | Jusqu'à Nos Jours | Par | Ferdinand Hoefer | [ornate rule] | Paris | Librairie Hachette Et C^{ie} | 79, Boulevard Saint-Germain, 79 | [short rule] | 1882.

8°: [4], [1]-411, [1] p. PAGE SIZE: 175 x 110 mm.

CONTENTS: [2 pgs], Series title page, "Histoire | Universelle | ...", verso "Ouvrages De M. Hoefer."; [2 pgs], Title page, verso blank.; [1]-285, Text of history of botany.; [286], Blank.; [287], Sectional title page, "Histoire | De La | Minéralogie | Et De | La Géologie."; [288], Blank.; [289]-408, Text of history of mineralogy and geology.; [409]-411, "Table Des Matières."; [1 pg], "Coulommiers.—Imprimerie Paul Brocard."

VERY SCARCE. Reprint of the 1872 edition, with a new title page.

HÖFER, Hans. (BORN: Elbogen, Bohemia, Germany, 17 May 1843; DIED: 1924) *Austrian mineralogist & mine engineer.*

From 1860 to '64, Höfer studied at the mining academy of Leoben. In 1879, he was named professor of mining at the mining academy in Příbram, Czechoslovakia.

In 1882, he was appointed professor of mineralogy, geology and economic geology at the mining academy in Leoben.

REFERENCES: DBA: I 547, 70-73; II 594, 381-394. • Knoll, *Österreichische Naturforscher*, 1957. • NDB: 9, 309. • *Österreich Biographisches Lexikon*. • Poggendorff: 3, 642-3, 4, 650 & 6, ?? . • WBI.

2305. — German, 1870.

Die Mineralien Kärnthens von Hans Höfer von Heimhalt. Klagenfurt, 1870.

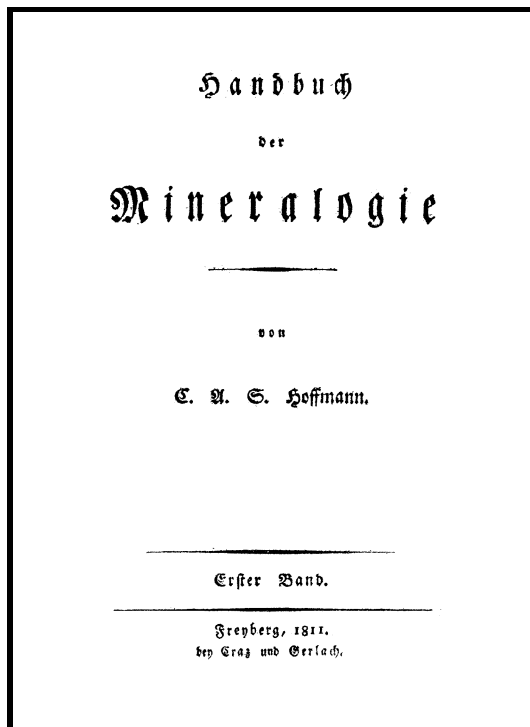
8°: 66 p. VERY SCARCE.

REFERENCES: Dana's 7th (Bibliography): 74.

HOFFMANN, Christian August Siegfried. (BORN: Freiberg, Germany, 3 July 1760; DIED: Freiberg, Germany, 15 March 1813) *German mineralogist.*

Inspector of precious stones, Hoffmann studied at the Freiberg Bergakademie under A.G. WERNER, who became his mentor. He was encouraged by his professor to distribute his ideas through writings. Hoffmann edited the *Bergmännischen Journal* from 1800 to 1804.

REFERENCES: ADB: 12, 593. • DBA: I 551, 392-393; II 600, 180. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Poggendorff: 1, col. 1123. • Schiffner, *Alter Freiberger Bergstudenten*, 1935-40: 1, 184 & 3, 127-8. • WBI.



HANDBUCH DER MINERALOGIE, 1811

2306. — German, 1811-8.

Handbuch | der | Mineralogie | [tapered rule] | von | C.A.S. Hoffmann. | [tapered rule] | Erste [-Vierte] Band. | [tapered rule] | Freyberg, 1811. | bey Craz und Gerlach.

4 vols. [VOL 1: 1811] 8°: *7 2A-2C⁸ 2D⁴ 2E¹: ??ℓ.; [i]-x, [1]-245, [1], [i]-xiv, [1]-58 p. PAGE SIZE: 194 x 118 mm.

CONTENTS: [Vol 1] [i-ii], Title page, verso blank; [iii]-iv, Dedication to Abraham Gottlob Werner, verso blank; [v]-vi, Preface; [vii]-xxiv, "Vorrede"; [1]-16, "Einleitung"; [17], "I. Präparativer Theil der Oryktognosie."; [18], Blank. [19]-349, Text, folding chart at page 326 titled: "Uebergänge der Gattungen und Arten des Silber-Geschlechtes Theils unter sich, Theils in Gattungen und Arten anderer Geschlechter."; [350], Blank.; [351], "II. Applikativer Theil der Oryktognosie."; [352], Blank.; [353]-685, Text.; [1 page], "Errata."; [2 pages], "Bey dem Verleger sind folgende Bergmännische Schriften in Menge zu haben."

[Vol 2, pt 1] [2 pages], Title page, verso blank.; [1]-382, Text.

[Vol 2, pt 2] [i-ii], Title page, verso blank.; [iii], Dedication to Abraham Gottlob Werner.; [iv], Blank.; [v]-vi, Preface.; [vii]-x, "Vorrede."; [2 pages], Blanks.; [1]-322, Text.; [2 pages], "Bey den Verleger sind unter andern auch folgende mineralogische, berg- und hüttenmännische Schriften in Menge zu haben."

[Vol 3, pt 1] [i-ii], Title page, verso blank.; [iii]-iv, "Vorrede" (iii-iv); [1]-339, Text.; [1 page], "Verbesserungen."

[Vol 3, pt 2] [1-2], Title page, verso blank.; [3]-311, Text.; [1 page], Blank;

[Vol 4, pt 1] [1-2], Title page, verso blank.; [3]-288, Text.

[Vol 4, pt 2] [i-ii], Title page, verso blank.; [iii]-x, "Vorrede."; [1], "Ergänzungen Berichtigungen und Zugaben." [2], Blank.; [3]-208, Text.; [209]-245, "Register über alle vier Bände und herrn Br. Werners Leztes Mineralsystem."; [1 page], "Noch einige Berichtigungen."; [i], "Abraham Gottlob Werner's Leztes Mineral-System."; [ii], Blank.; [iii]-xiv, "Vorbericht."; [1]-26, "Mineral-System."; [27]-58, "Anmerkungen."

VERY SCARCE. This work is one of the greatest encyclopedias of Werner's mineral theories ever published. It was the only authorized publication of Werner's mineral system. It was begun by Hoffmann who died after the first two volumes were published, and continued on by the young August Breithaupt, who completed the third and fourth volumes. In this monumental treatise, the Wernerian doctrine of mineralogy is propagated in its fullest treatment. The authors accept all of Werner's theories concerning mineral formation and classification, and includes numerous illustrative examples. The text is extremely generous in its treatment of the subject, sometimes devoting long detailed sections to minute points. Werner did not publish much on his theories but his students and followers insured that his ideas would reach a larger audience by authoring their own works following his guidelines.

The first volume provides a short history of mineralogy, definitions, descriptions of physical properties, including color, optics, streak, hardness, specific weight, transparency, luster, and crystal form, chemical qualities, the use of the blow-pipe, nomenclature, and a synopsis of the classification system. Later volumes contain essentially a descriptive mineralogy. Under each species, all that was known is included in the descriptions.

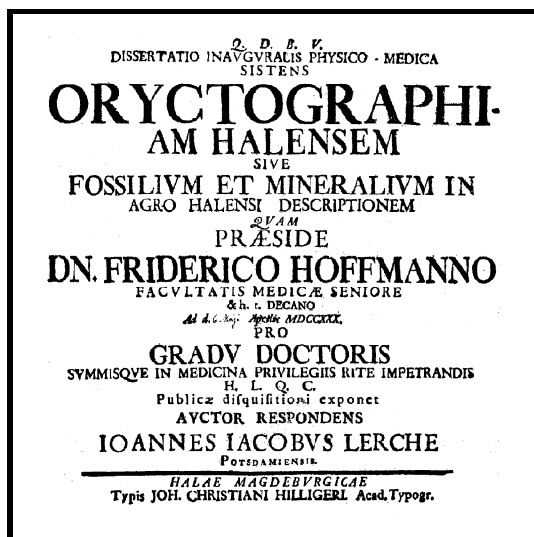
REFERENCES: Dana's 7th (Bibliography): 74. • Ferchil: 239. • Freilich Sale Catalog: no. 251. • LKG: XII 187.

• Poggendorff: 1, col. 1123. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1094.

HOFFMANN, Friedrich. (BORN: Halle, Germany, 19 February 1660; DIED: Halle, Germany, 12 November 1742) *German physician.*

Hoffmann was the son of Friedrich Hoffmann [1626-1675], a well-known municipal physician of Halle. In 1675, he lost both his parents and a sister within a few days. In his youth, he was educated at home, including instruction in anatomy and pharmacology. From 1678 to 1680, he studied medicine at the University of Jena, receiving his M.D. in 1681. Afterward, Hoffmann embarked on an extended tour of Belgium, Holland, and England, studying medical methods. In 1681, he accepted a position at the University of Jena, but soon left due to jealousy from the senior faculty. For the next decade he successfully practiced his craft in Minden and Halberstadt. In 1693, Hoffmann was named the first professor of medicine at the University of Halle and charged with organizing the medical school. Except for a couple of tenures as court physician in Berlin, he remained in Halle.

REFERENCES: ADB: 12, 584-8. • *Catalogue of Portraits of Naturalists*: 587-8 [9 portraits listed]. • DBA: I 552, 141-245; II 601, 4-43. • DSB: 6, 458-61 [by G.B. Risse]. • Hirsch, *Biographisches Lexikon*, 1884-8: 3, 256-9. • Hirsching, *Historisch-literarisches Handbuch*, 1794-1815. • Jöcher, *Gelehrten-Lexikon, Supplement*. • NDB. • Poggendorff: 1, cols. 1122-3. • Schaedler, *Biographisch Handwörterbuch*, 1891: 53. • Schrader, *Biographisch Lexicon der Tierärzte*, 1863. • WBL. • Wilson, *History of Mineral Collecting*, 1994: 176. • Zischka, *Allgemeines Gelehrten-Lexikon*, 1961: 296.



SISTENS ORYCTOGRAPHIAM HALENSEM, 1730

2307. — Latin, 1730 [Dissertation].

Q. D. B. V. | Dissertatio Inavgvralis Physico-Medica | Sistens | Oryctographi- | am Halensem | Sive | Fossilivm Et Mineralivm In | Agro Halensi Descriptionem | Qvam | Præside | Dn. Friderico Hoffmanno | Facvltatis Medicæ Seniore | & h.t. Decano | Ad d. [Handwritten: 6. Maji] Aprilis MDCCXXX. | Pro | Gradv Doctoris | Svmmisqve

In Medicina Privilegiis Rite Impetrandis | H. L. Q. C. | Publicæ disquisitioni exponet | Avctor Respondens | Ioannes Iacobvs Lerche | Potsdamiensis. | [rule] | Halae Magdeburgicae | Typis Joh. Christiani Hilligeri. Acad. Typogr.

4°: A-G⁴ (2); 30ℓ.; [1]-56, [4] p. PAGE SIZE: 192 x 160 mm.

CONTENTS: [1-2], Title page, verso blank.; [3], "Viro Illvstri Atqve Excellen- | tissimo | Domino | Friderico Hoffmanno | ..."; [4], "Viro Plvrimvm Reverendo Et | Amplissimo | Dominno | M. Ioanni Christiano | Lerche | ..."; [5]-6, "Prooemivm."; 6-56, Text.; [4 pgs], "Prænobili Et Doctissimo | Dno. Lerchio | Digno Medicinæ Candidato | S.D.P. | Fridericvs Hoffmannvs." (=testimonials to the dissertation).

RARE. Dissertation — University of Halle. The respondent was Johann Jakob Lerche [see note below]. The text provides a description of the types of fossils and minerals found in the vicinity of Halle. It is divided into six chapters and discusses mineral springs, earths useful to medicine and manufacture, figured stones, fossils, salts, and metals and minerals. References are given through out to the major mineralogical works of the time.

Johann Jacob Lerch (Lerche). (BORN: Potsdam, ??, 27 December 1703; DIED: St. Petersburg, Russia, 23 March 1780) *German physician.* Lerch emigrated to Russia in 1731, becoming from 1732 to 1736 a field doctor in the Russian army stationed in Persia. Between 1745 and 1748, he made two extensive trips throughout the region. He participated in a war between Russia and Turkey in 1770, before retiring to St. Petersburg.

REFERENCES: BL: [B.391.(1.)]. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 103-4. • Hoover Collection: no. 529. • LKG: XIV 180. (Lerch (Lerche)) *Biographie Universelle.* • Hirsch, *Biographisches Lexikon*, 1884-8. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16. • *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 1430.

2308. Dissertation, 1734: Dissertatio Inauguralis Physico-Medica de Ebores Fossili Suevico Halensi quam ... præside ... F. Hoffmanno ... defendet auctor, &c. Halæ Magdeburgicae, [1734].

4°: 29, [3] p.

RARE. Dissertation — University of Halle. The respondent was Joanne Friedrich Beyschlag.

REFERENCES: BL: [B.385.(9.)]. • BMC: 6, 89. • Gatterer, *Mineralogischen Literatur*, 1798-9: 2, 357. • LKG: XVII 85. • Ward & Carozzi, *Geology Emerging*, 1984: no. ??.

2309. — Latin, 1754-61 [Collected works].

Friderici | Hoffmanni | [...3 lines of titles and memberships...] | Opera Omnia | Physico-Medica, | Denuò revisa, correctæ & aucta, | In Sex Tomos Distributa; | Quibus Continentur | Doctrinæ Solidis Principiis Physico-Mechanicis, | & Anatomicis, atque etiam observationibus clinico-practicis suprestructæ; | Methodo Facili Ac Demonstrativa Deductæ, | & per experientiam LXVII. annorum stabilitæ. | Cum Vita Auctoris, | Et ejus Præfatione de differente Medicinæ & Medicorum statu atque conditione, | & criteriis boni ac periti Medici. | Tomus Prima. | [vignette]

| Genevæ, | Apud Fratres De Tournes. | [double rule] | M. DCCLIV [-M. DCCLXI].

6 vols., plus 4 supplemental vols. [VOL 1: 1754] 2°: π^2 *4 a-b⁶ d-c⁴ A-Rr4v; ??ℓ.; [12], i-xxxvi, [1]-476 p., frontispiece (portrait of Frideric Hoffmann, dated 1660). [VOL 2] 2°: π^2 A-GG6r; ??ℓ.; [4], [1]-355, [1] p. [VOL 3] 2°: π^2 A-Ddd⁴; ??ℓ.; [4], [1]-584 p. [VOL 4: 1761] 2°: *6 A-Ccc⁸; ??lv.; [12], [1]-468, [4], 469-588 p. [VOL 5: 1761] 2°: π^2 A-Hh7; ??ℓ.; [4], 1-374 p. [VOL 6: 1761] 2°: π^2 A-Ff5; ??ℓ.; [4], 1-346 p. [First suppl., vol. 1: 1754] 2°: *4 A-Dddd⁶; ??ℓ.; [8], [1]-871, [1] p. [First suppl., vol. 2: 1760] 2°: *6 A-Vvv⁵; ??ℓ.; [12], [1]-782 p. [Second suppl., vol. 1: 1760] 2°: π^2 A-Fff⁸; ??ℓ.; [4], [1]-628 p. [Second suppl., vol. 2: 1760] 2°: π^2 A-R⁵; ??ℓ.; [4], 1-194 p. Three of the titles in red and black, frontispiece portrait of author, woodcut printer's devices and vignettes. With 3 engraved plates, numerous woodcut head- and tailpieces and initials. PAGE SIZE: 372 x 240 mm

CONTENTS: [Vol 1] Frontispiece, showing head and torso in an oval frame that rests on a pedestal. Text at the bottom reads, "Fridericus Hoffmannus | [...4 lines of text..., dated 1660.]; [2 pgs], Half title page, "Friderici | Hoffmanni | Opera Omnia, | In Sex Tomos Distributa," verso blank.; [2 pgs], Title page, verso blank.; [7 pgs], Dedication to Friderico Guillelmo.; [1 pg], Blank.; i-xvi, "Commentarius | De Vita | Friderici | Hoffmanni | [...3 lines of titles and memberships...] | Auctore | Joanne Henrico Schulze | Philosophiæ ac Medicinæ Professore publico."; xvii-xviii, "Fridericus | Hoffmannus | Lectori Benevolo Salutem."; xix-xx, "Bibliopolæ | Lectori."; xxi-xxxiv, "Præfatio | Auctoris."; xxxv, "Approbationes."; xxxvi, "Conspectus Generalis [=very general table of contents]; [1], Sectional title page.; [2], Blank.; 3-10, "Præfatio."; 11-12, Table of contents of volume one.; 13-140, Text.; [141], Sectional title page.; [142], Blank.; 143-145, "Præfatio."; 146, Table of contents.; 147-276, Text.; [277], Sectional title page.; [278], Blank.; 279-283, "Præfatio."; 284, Table of contents.; 285-476, Text.

[Vol 2] [2 pgs], Title page, verso blank.; [1 pg], "Conspectus | Tomi Secundi."; [1 pg], Blank.; [1], Sectional title page.; [2], Blank.; 3-6, "Præfatio."; 7-8, Table of contents.; 9-188, Text.; [189], Sectional title page.; [190], "Doctissimis | Medicis Junioribus."; 191-192, "Præfatio."; 193, Table of contents.; 194-355, Text.; [1 pg], Blank.

[Vol 3] [2 pgs], Title page, verso blank.; [2 pgs], "Conspectus | Tomi Tertii," verso blank.; [1], Sectional title page.; [2], Blank.; [3], "Omnibus Et Singulis ..."; 4-8, "Præfatio" with table of contents at end.; 9-188, Text.; [189], Sectional title page.; [190], Dedication.; 191-193, "Præfatio" with table of contents at end.; 194-364, Text.; [365], Sectional title page.; [366], Blank.; 367-368, "Præfatio" with table of contents at end.; 369-467, Text.; [468], Blank.; [1 pg], Sectional title page, "Friderici | Hoffmanni | Supplementum."; [1 pg], Table of contents.; [2 pgs], "Præfatio."; 469-503, Text of supplement.; [504], Blank.; 505-584, "Index | Locupletissimus | Rerum Omnium."

[Vol 4] [2 pgs], Title page, verso blank.; [1 pg], "Conspectus | Tomi Quarti."; [4 pgs], "Præfatio."; [5 pgs], "Conspectus Casuum." [=table of contents]; [1]-424, Text.; 425-440, "Index Rerum."; [441], Sectional title page.; [442], "Illustrissimæ Societati."; 443-447, "...Præfatio Epistolaris..."; 448, Table of contents.; 449-548, Text.; 549-558, "Index Rerum."; 559-588, "Friderici Hoffmanni | Dissertatumum | Physico-Chemicarum | Trias."

[Vol 5] [2 pgs], Title page, verso blank.; [2 pgs], "Conspectus | Tomi Quinti." [=table of contents]; 1-374, Text.

[Vol 6] [2 pgs], Title page, verso blank.; [2 pgs],

"Conspectus | Tomi Sexti." [=table of contents].; 1-346, Text.

[Supplementary volumes.]

[First suppl., vol 1] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [3 pgs], "Bibliopolæ | Lectori."; [1 pg], Table of contents.; [1]-871, Text.; [1 pg], Blank.

[First suppl., vol 2] [2 pgs], Half title page, verso blank.; [2 pgs], Title page, verso blank.; [3 pgs], "Bibliopolæ | Lectori."; [1 pg], "In Novam Hanc Epititionem | Admonitio."; [4 pgs], "Consepectus Generalis." [=table of contents].; [1]-782, Text.

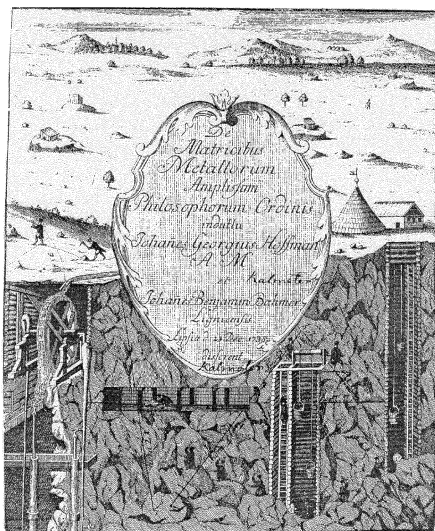
[Second suppl., vol 1] [2 pgs], Title page, verso blank.; [2 pgs], "Conspectus | Partis Secundæ."; [1]-628, Text.

[Second suppl., vol 2] [2 pgs], Title page, verso blank.; [2 pgs], "Conspectus | Partis Tertiæ."; [1]-194, Text.

VERY SCARCE. This is the third edition of the collected works of Hoffmann and second edition of all the supplements to the original *Opera Omnia* (1740-53). Hoffmann was a prolific writer, covering a wide scope of contemporary medicine. Included here is his most important medical contribution, the *Medicinae Rationalis Systematicæ*, as well as works on pediatrics, physiology, pathology, medical ethics and personal hygiene. Hoffmann was the first to provide descriptions of appendicitis, chlorosis, rubella and convulsive asthma with dropsy.

The son of a prominent German physician, Hoffmann (1660-1742) studied at Jena, and later worked with Robert Boyle in England before returning to teach medicine at Halle. He was a prominent practitioner and for a while served as physician to Frederick I of Prussia. Hoffmann is best known as the designer of the mechanico-dynamic system, in which health is conceived of as normal movement and disease as disturbed movement.

REFERENCES: Garrison & Morton: no. 72 [1740 edition]. • *Heirs of Hippocrates*, 1990: no. 702 [1740 edition]. • Sallander, *Bibliotheca Walleriana*, 1955: nos. 1814-6 [1761 edition]. • Wellcome Catalog (Books): 3, p. 285.



DE MATRICIBUS METALLORUM, 1738

HOFFMANN, Johann Georg.

2310. — German, 1734 [Dissertation].

Einige Nachricht Von denen um Leipzig befindlichen Arten aus den Mineralischen Reiche, übergab Dem Wohl-Edlen und Wohl-gelahrten Herrn, Herrn Adolph Beyer, aus Freyberg, Advocat. Elect. et Not. Als Derselbe aus Leipzig gieng, in Nahmen Einiger zu Lesung Monathlicher und Neuer Schrifften vereinigten guten Freunde, M. Johann George Hoffmann, Lips. Medic. Baccal. ... Leipzig, Langenheim, 1734.

4°: [12] p.

RARE. Dissertation.

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 127. • LKG: XIV 189. • NUC: [no copy listed].

2311. — Latin, 1738 [Dissertation].

[Incorporated into an elaborate engraved mining scene:] De | Metallorum | Amplissim | Philosophorum Ordinis | indutlu | Johānes Georgius Hoffman | A.M. | et Johānes Benjamin Boëhmer | Lignicensis | Lipsia d. 23 Dec. 1738, | disserent.

8°: π^3 A-M⁴; 51 ℓ .; [6], [1]-96 p. Engraved title page, engraved by Kuhnel. PAGE SIZE: 224 x 180 mm.

CONTENTS: [2 pgs], Engraved title page, verso blank.; [1 pg], "Illvstrissimi | Collegii Metallici | [...20 lines of text...] | Ioannes Georgivs Hoffmannvs."; [1 pg], Blank.; [2 pgs], "Viri | Illvstrissime | Per-Illvstris | Excellentissimi Amplissimi | Doctissimi."; [1]-96, Text.

RARE. Dissertation, for which Johann Benjamin Boëhmer [1719-1754] was respondent. It contains observations about the origins, composition and analysis of various metals. The elaborate engraved title page depicts a cross section through an underground mine, and shows shafts, a water pump and ore haulage to the surface. Up top one sees technicians surveying the land and studying various samples.

REFERENCES: LKG: XVI 79.

HOGG, Thomas.

2312. — English, 1825.

A | Manual | Of | Mineralogy; | In Which Is Shown How Much | Cornwall | Contributes To The Illustration Of The Science. | [double rule] | "Hic fontes Natura novos emisit." | [double rule] | Truro: | Printed And Published By W. Polyblank High Cross; Sold | By G.B. Whittaker, London; J. Tregonino, | And Mrs. Heard, Booksellers, Truro. | [tapered rule] | 1825.

8°: [6], [i]-xviii, [1]-245, [1] p., frontispiece (showing 7 crystal systems).

CONTENTS: [Frontispiece].; [2 pgs], Title page, verso "Entered at Stationer's Ball."; [1 pg], Advertisement, dated August 1825.; [1 pg], Blank.; [1 pg], "Contents."; [1 pg], Blank.; [i]-xviii, "Introduction."; [1]-228, Text.; [229]-237, "Mineralogical Questions."; [238], Blank.; [239]-245, "Index."; [1 pg], "Errata."

VERY SCARCE. This work was published in two issues, one with Hogg's names on the title page and the

HOLLANDUS

other as described with no indication as to the actual author.

"This Manual contains a concise description of minerals in general, and the localities of those of Cornwall, ... with economical uses of metals, and other species; an account of the mode of smelting tin and copper-ores; an explanation of terms; and mineralogical questions."—*Advertisement*.

REFERENCES: BL: [7106.bbb.18.].

HOLLANDUS, Johan Isaäc. *Dutch alchemist*.

Thought to be contemporary with Basilius Valentinus, Hollandus and his son are probably inventions, and never actually lived. They are said to be the first alchemists of Holland, and their techniques praised by Paracelsus, Boyle, and Kunckel. They are said to have lived in the fifteenth century because they do not cite any later authority, but no evidence has ever been found as to their true identity.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78: 9, 33. • Lippmann, E.O., "Über die unter dem Namen der 'Hollandi' bekannten Alchemisten," *Chemische Zeitung*, 43 (1919), no. 58, 265-7, no. 61, 286-8 & no. 63, 301-3. • Lippmann, E.O., "Über das Zeitalter der Alchemisten J.I. und I. Hollandus," *Chemische Zeitung*, 40 (1916), nos. 85-86, 605. • Lippmann, E.O., "Zur Kenntnis der 'Hollandi' genannten Alchemisten," *Chemische Zeitung*, 57 (1933), no. 24, 233. • Moerman, J.D., "Uit alchemistische geschriften. Isaac en Johan Issac Hollandus," *Chemische Weekblad*, 29 (1932), no. 49, 702-9. • Partington, *History of Chemistry*, 1961-70: 2, 203-8. • Stillman, *Story of Early Chemistry*, 1924: p. 368-367. • Sudhoff, Karl., "Bibliographie Isaaks und Johann Isaaks, der 'Holländer'," *Sudhoffs Archiv*, 27 (1934), p. 45-50, 5 figs. • Waite, *Lives of Alchemistical Philosophers*, p. 123-124. • WBI.

2313. — Latin, 1600 [First edition].

Magistri Joannis Isaaci Hollandi ... Opera Mineralia, sive de Lapide Philosophico, omnia, duobus libris comprehensa. Nunquam antehac edita, ac nunc primum ex optimis manu-scriptis Teutonicis exemplaribus fidelissimè in Latinum sermonem translata, à P.M.G., Middelburg, Richardus Schilders, 1600.

8°: A-Ee⁸; 224ℓ.; [16], [1]-431, [1] p. With dozens of small woodcut illustrations in the text, 2 woodcut initial letters, one woodcut tailpiece, cast fleurons, and roman and italic type.

VERY SCARCE. A classic among the alchemical texts, although the authorship is doubtful. It is written in a canting alchemical and almost unreadable. (Partington) "Of the person or persons called Hollandus very little is known. By those who consider them two persons, Isaac is regarded as the father and John Isaac as the son...The dates assigned to the Hollands are very various. They have been put in the thirteenth, fourteenth, and fifteenth centuries...Boerhaave said: 'they describe all the operations to the most minute circumstances..., write excellently of distillation, fermentation, putrefaction, and their effects, and seem to have understood at least as much of these matters as any of the moderns.'" They describe very skillful operations in enameling and in imitating precious stones.

The first edition of any work by the mysterious Johannes Isaac Hollandus, a Latin translation of a German manuscript of his treatises on mineralogy, alchemy and the philosopher's stone, and especially on the use of metal oxides to colour stones and crystals to make fake gems and precious stones. The charming little woodcuts show distilling and other equipment. The preliminaries include verses by the Zeeland notables Petrus Hondius, Enoch Sterthemius, and Cornelis Herls (d. 1625), and a 12-page dedication to Count Everard of Solms. The first and most important edition by the mysterious Hollandus, and a lovely little book with instructions for making fake gems and precious stones.

REFERENCES: BL: [8907.a.26]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 300. • Ferguson, *Bibliotheca Chemica*, 1906: 1, 412 [no copy in the Young collection]. • Honeyman Sale: no. 1761. • LKG: III 37. • Neu, *Chemical, Medical & Pharmaceutical Books*, 1965: no. 2073. • Partington, *History of Chemistry*, 1961-70: 2, 203-8. • Shaaber, *Sixteenth Century Imprints*, 1976: H-162. • Sinkankas, *Gemology Bibliography*, 1993: [not listed]. • Sudhoff, Karl., "Bibliographie Isaaks und Johann Isaaks, der 'Holländer'," *Sudhoffs Archiv*, 27 (1934), p. 45-50, 5 figs: p. 46. • Wellcome Catalog (Books): 1, no. 3431.

2314. — Latin, 1616.

D. magistri Ioannis Isaaci ... Opera mineralia, et vegetabilia, sive De lapide philosophico, quæ reperire potuimus, omnia. Nunquam antehac edita, ac nunc primum ex optimis manuscriptis teutonicis exemplaribus fidelissime in latinum sermonem conuersa. Arnheimii: Apud Ioannem Iansonium, 1616.

8°: A⁸ 2A⁸ B-E⁸ F⁴ 2B-2F⁸ G-2E⁸; 268ℓ.; [16], 88, 431 p., title vignette, head- and tailpieces, illus., diags. VERY SCARCE.

REFERENCES: BL: [1033.d.6]. • Hoefer, *Histoire de la Chimie*, 1866-9: 1, 478. • Hoover Collection: no. 443 [under Isaac]. • LKG: III 37.

2315. 2nd edition, 1746: Sammlung unterschiedlicher bewährter Chymischer Schriften, ... Hand der Philosophen, Opus Saturni, Opera Vegetabilia, Opus Minerale, Cabala, de Lapide Philosophico, Nebst einem Tractat von den Irrgängen derer Alchymisten, Auctoris incerti, neue und verbesserte Auflage. Vienna, Johann Paul Krauß, 1746.

10 parts in 1 volume. 8vo. Title in red and black, 5 half-titles, 16 full-page engraved plates, several woodcut illustrations in text.

VERY RARE. Very rare second edition of collection of alchemical works in German by mysterious Johannes Isaac Hollandus. There are many uncertainties about his person. Firstly, it is unclear whether there is one Hollandus, Johannes Isaaci, or two persons, Johannes and Isaac. The date has long been a matter of controversy, but most scholars now maintain the latter half of the sixteenth or the beginning seventeenth century. The confusion was caused by the great similarity to Paracelsan writings, who was accused by some of having plagiarized Hollandus. It has now been established that Hollandus wrote after Paracelsus but wanted to pretend that he antedated his writings. He therefore omitted any mention of sixteenth century authorities, because Paracelsus died in 1541.

According to Partington, p. 207, Hollandus writes in a "canting alchemical style," "some of the recipes are clearly described," and furthermore that Hollandus believed that "each metal contains in its interior the

principle of the tincture of gold and silver and when the elixir is projected on the metal this principle comes to the surface and colours the metal yellow or white."

According to Ferguson, the present work was first published in Frankfurt in 1667, in an edition of 384 pages. This is the greatly enlarged (752 pages), second edition.

REFERENCES: Ferguson, *Bibliotheca Chemica*, 1906: 1, 413-4. • Partington, *History of Chemistry*, 1961-70: 2, 203-8. • Stillman, *Story of Early Chemistry*, 1924: p. 368-71.

2316. German transl., 1666: Das Dritte Theil Des Mineral-Wercks Johannis Isaci Hollandi, Darinn die Figuren seiner geheimen Oefen und etlicher andern Gefässen und Instrumenten enthalten ... Franckfurt, Götze, 1666.

8°: 171 p., 4 engraved plates (showing 25 figures). Printer's mark on the title.

RARE. Translated and edited by Benedikt Nikolaus Petraeus.

REFERENCES: BL: [1034.b.15. (I)]. • Duveen, *Bibliotheca Alchemica et Chemica*, 1965: p. 301 [dates the work 1666]. • STC: D-793. • Wellcome Catalog (Books): 4, 346.



SAMMLUNG UNTERSCHIEDLICHER, 1773

2317. German transl., 1773: Sammlung | unterschiedlicher bewährter | Chymischer | Schriften, | namentlich: | Joh. Isaaci Hollandi | Hand der Philosophen, | Opus Saturni, Opera Vegetabilia, Opus Mineralia, Cabala, de Lapide Philosophico, | Nebst einem Tractat | von den Irrgängen derer Alchymisten, | Auctoris incerti, | neue und verbesserte Auflage, | mit gehörigem Fleiße übersehen, | und | mit einem Verzeichnüs derer in jeglichem | Tractat befindlichen wichtigsten Materien | vermehret, | wie auch mit nöthigen Kupfern gezieret. | [rule] | Wien | In Verlag bey Joh. Paul Krauß, Buchhändler | 1773.

8°:)(8 A-Aaa⁸ (\$5 signed); 389ℓ.; [16], 1-762 p. (pages 129-138 & 425-426 omitted in the pagination). RARE.

REFERENCES: Mellon, *Alchemy and the Occult*, 1968-77: no. 157.

HONESS, Arthur Pharaoh. (BORN: Berea, Ohio, U.S.A., 10 August 1887; DIED: Philadelphia, Pennsylvania, U.S.A., 17 December 1942) *American mineralogist & economic geologist.*

Honess graduated from Oberlin College, Ohio in 1914, becoming assistant in mineralogy under A.H. PHILLIPS at Princeton University. In 1917, he was appointed assistant professor of mineralogy at Pennsylvania State College, becoming full professor there in 1931.

REFERENCES: ABA: II 282, 38. • *American Mineralogist*: 28 (1943), no. 3, 151-4, portrait [by W.M. Myers]. • *Mineralogical Magazine*: 28 (1947), no. 199, 202 [by L.J. Spencer]. • *Proceedings of the Geological Society of America*: 1943, 195-200, portrait [by P.D. Krynnine]. • Sarjeant, *Geologists*, 1980: 2, 1289 & Suppl. 1 (1986), 1, 500. • WBI. • *World Who's Who in Science*: 822.

2318. — English, 1927.

The Nature, Origin and | Interpretation of the | Etch Figures on Crystals | By | Arthur P. Honess, D.Sc. | Associate Professor of Mineralogy and Petrography, | Pennsylvania State College | New York | John Wiley & Sons, Inc. | London: Chapman & Hall, Limited | 1927.

8°: [i]-xi, [1] Blank, [1]-171, [1] p., frontispiece, one plate, 14 text illus., 79 photographs, index.

CONTENTS: [i-ii], Half title page, "The Nature, Origin and | Interpretation of the | Etch Figures on Crystals," verso blank.; [Facing pg 1], Frontispiece, "Natural Etch Figures on Aragonite."; [iii-iv], Title page, verso "Copyright 1927 | By Arthur P. Honess | ..."; v-vi, "Preface."; vii, "Contents."; [viii], Blank.; ix-xiii, "Introduction."; [1 pg], Blank.; ix-xiii, "Introduction." [1 pg], Blank.; [1]-164, Text.; 165-171, "Index."; [1 pg], Blank.

VERY SCARCE. Determinative mineralogy. "This book represents an attempt to bring together, from a number of different sources, ... the more outstanding facts concerning the nature and origin of Etch Figures as produced by solvent action upon the plane surfaces of crystals."—Preface

Contents: I. A History of the Development of the Etch Method; II. A Description of the Method Employed in the Etching and Examination of Crystals; III. The Etch Figure; IV. Anomalous Etch Figures and Suggestions as to their Origin; V. The Importance of the Etch Figure in Isomorphism; VI. The Symmetry of Several Important Minerals as Shown by Their Etchings; VII. Summary and Conclusions.

REFERENCES: Dana's 7th (Bibliography): 74.

HOOKE, Robert.

Hooke's father John Hooke was the local vicar. It was the ambition of his parents that Robert should receive an education befitting him for Holy Orders, but he had a delicate constitution and although sprightly and quick-witted was unable to study on account of frequent and severe headaches.

After his father's death in October 1648, Robert Hooke went to Westminster School and soon displayed an outstanding ability in mathematics. In 1653 he entered Oxford University where his knowledge of mechanics and inventive skill was noticed by Robert Boyle who engaged Hooke as his assistant. Through Boyle's influence Hooke

HOOKE

was appointed Curator to the Royal Society on 1th November 1662 and on 3rd June the following year was elected a Fellow.

The genius of Hooke was justly rewarded by the Royal Society when they perpetuated his appointment as Curator with a good salary, providing him with apartments in Gresham College, Bishops-gate Street, where he resided for the rest of his life.

Elected Professor of Geometry at the College on 20th March 1665 Hooke concentrated on the invention of mechanical devices, the development of the microscope and the study of astronomy. From 1st October 1677 to 30th November 1682 he acted as Secretary to the Royal Society in addition to his other duties and edited seven numbers of the Philosophical Collections, substituted by him for the Society's Transactions. In spite of poor health since childhood Hooke was a prodigious inventor and his mind was so prolific that there was scarcely a discovery made which he did not claim to have conceived himself.

Hooke was involved in a Chancery suit concerning his salary in 1696 and although he won the case the ordeal brought about a further deterioration of his health. During the last year of his life blindness and swelling of the legs rendered him helpless and he died at Gresham College on 3rd March 1703 at the age of sixty-seven. He was buried in the local church of St. Helen.

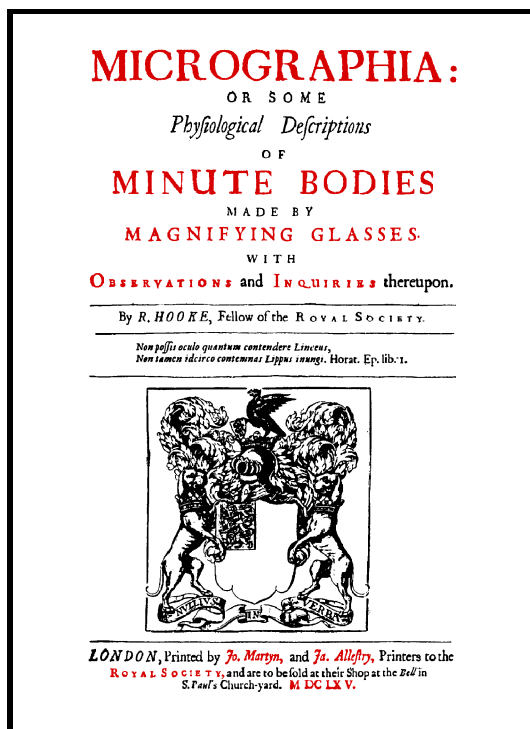
Sources Dictionary of National Biography (repr., London: Oxford University Press, 1949-50), 9, 1177-81. Biographia Britannica, 1st ed. (London, 1747-66), 4, 2652-63. John Ward, The Lives of the Professors of Gresham College, facsimile ed. (New York, 1967), pp. 169-93. Margaret 'Espinasse, Robert Hooke, (London, 1956). Q143 .H78E77 John Aubrey, Brief Lives, 1, 409-16. R.S. Westfall, Introduction, Posthumous Works, reprint ed. (New York, 1969). Richard Waller, "The Life of Dr. Robert Hooke," Posthumous Works, (London, 1705). E.N. da C. Andrade, "Robert Hooke," Proceedings of the Royal Society, 201A (1950) 439-73. ANONYMOUS, "Robert Hooke, F.R.S. (1635-1703)," Notes and Records of the Royal Society, 15 (1960), 137-45. Robert McKeon, "Le debut de l'astronomie de precision," Physis, 13 (1971), 225-88; 14 (1972), 221-42; especially 13, 244-5 and 14, 229-30. Michael Hunter and Simon Schaffer, eds. Robert Hooke: New Studies, (Woodbridge, England, 1989). J.A. Bennett, "Robert Hooke as Mechanic and Natural Philosopher," Notes and Records of the Royal Society, 35 (1980-1), 33-48. Geoffrey Keynes, A Bibliography of Dr. Robert Hooke, (Oxford, 1960). Penelope Gouk, "The Role of Acoustics and Music Theory in the Scientific Work of Robert Hooke," Annals of Science, 37 (1980), 573-605.

Not Available and Not Consulted E.G.R. Taylor, "Robert Hooke and the Cartographical Projects of the Late Seventeenth Century," Geographical Journal, 9 (1937), 529-40. W.S. Middleton, "The Medical Aspect of Robert Hooke," Annals of Medical History, 9 (1927), 227-43.

REFERENCES: Poggendorff: 1, cols. 1137-8.

2319. — English, 1665 [First edition, issue A].

[In red:] Micrographia: | [in black:] Or Some | Physiological Descriptions | Of | [in red:] Minute Bodies | [in black:] Made By | [in red:] Magnifying Glasses. | [in black:] With | [in red:] Observations [in black:] and [in red:] Inquiries [in black:] thereupon. | [rule] | By [in red:] R. Hooke, [in black:] Fellow of the [in red:] Royal Society. | [in black, rule] | Non possis oculo quantum contendere Linceus, | Non tamen idcirco contemnna Lippus inungi. Horat. Ep. lib. I. | [rule] | [Within a single rule box: coat of arms] | [rule] | London, Printed by [in red:] Jo. Martyn, [in black:]



MICROGRAPHIA, 1665

and [in red:] Ja. Allestry, [in black:] Printers to the | [in red:] Royal Society, [in black:] and are to be sold at their Shop at the Bell in | S. Paul's Church-yard. [in red:] M DC LX V.

2°: π^2 A² a-g² B-C² D-Z⁴ Aa-Kk⁴ Ll-Mm²; 146 ℓ .; [36], 1-246, [10] p., 38 plates. Title page in red and black.

CONTENTS: π 1r, blank; π 1v, "Imprimatur."—dated 23 November 1664.; π 2r, Title page.; π 2v, Blank.; A1r-A2r, "The Epistle Dedicatory"; A2v, Address to the Royal Society.; a1r-g2v, "The Preface."; 1-246 (B1r-Kk3v), Text.; Kk4r-Mm2r, "The Table." [=contents].; Mm2v, "Errata."

PLATES: There are thirty-eight engraved plates called schemes, some folding, illustrating scientific objects with several as seen under the microscope. The figures contain key numbers and letters for reference from the text. Plates II and XXXIV are the only ones indicating the numbers of the pages facing.

RARE. *Micrographia* is one of the first books published under the the auspices of the Royal Society, and at a meeting of the Council held on November 23rd, 1664, the President was requested to sign the licence for the printing of the book. (Keynes)

Hooke was much more than a naturalist and never happier than when studying details of animal and vegetable structure under the microscope. In this work he describes and theorises in a most accurate and informative fashion upon the scale of an eel, the underside of a nettle leaf, the sting of a bee and the common moulds. He was no specialist like his successors who considered themselves experts in the use of the microscope; although they may have probed

deeper their work was confined to narrower limits. The lepidoptera are represented by a single species, the White Plume Moth *Alucila pentadactyla* L. or, as Hooke calls it, 'The White Feather-winged Moth' which he says is sometimes found on nettles.

The preface to the second edition contains the interesting information that the first edition of the *Micrographia* has 'grown extremely scarce and the price thereof greatly raised'. The fact is also mentioned that the original copperplate blocks were used for illustrating the second edition, with the exception of seven which had been lost and replaced by exact copies.

The first edition was reproduced in facsimile by Robert Gunther in 1938 as part of a larger work. Robert William Theodore Gunther was born at Surbiton, Surrey, on 23rd August 1869. After studying zoology at London and Oxford Universities he was appointed Lecturer at Magdalen College, Oxford, in 1897. Gunther published a number of works dealing with the history of science and died March 1940.

Facsimile reprint, 1938: Early Science in Oxford by R. T. Gunther Vol. XIII The Life and Work of Robert Hooke (Part V) *Micrographia*, 1665. Oxford, Printed for the Subscribers 1938. 8°: x, [36], 274 p.

[i]-x, preliminary matter; pp. [36]+256 facsimile reprint, issue 1665; pp. 257-270 index reprinted from the abridgement of the 1780 issue, no. 40; pp. 271-274 supplementary index (1938).

REFERENCES: Horblit: no. 50 [title page reproduced].
• Keynes, *Bibliography of Dr. Robert Hooke*, 1960: no. 6. • Lisney, *Bibliography of British Lepidoptera*, 1960: no. 37. • LKG: XVII 154 & 155. • Schmitz, *Handbuch zur Geschichte der Optik*, 1981-90: 1, ??; • Wing: H-2620.

2320. First edition, issue B, 1667: *Micrographia*: Or some Physiological Descriptions of Minute Bodies made by Magnifying Glasses. With Observations and Inquiries thereupon. [rule] By R. Hooke, Fellow of the Royal Society. [rule] Non possis oculo quantum contendere Linceus, Non tamen idcirco contemnas Lippus inungi. Horat. Ep. lib. I. [rule] [coat of arms within single line] [rule] London, Printed for James Allestry, Printer to the Royal Society, and are to be sold at his Shop, at the Rose and Crown in Duck-Lane. M DC LXVII.

2°: π² A² a-g⁸ B-C² D-Z⁴ Aa-Kk⁴ Ll-Mm²; 146ℓ.

CONTENTS: π1r, blank; π1v, "Imprimatur."—dated 23 November 1664.; π2r, Title page.; π2v, Blank.; A1r-A2r, "The Epistle Dedicatory"; A2v, Address to the Royal Society.; a1r-g2v, "The Preface."; 1-246 (B1r-Kk3v), Text.; Kk4r-Mm2r, "The Table." [=contents].; Mm2v, "Errata."

PLATES: As in no. 37 and printed from the same blocks with the numbers of the pages which the plates face added to all the engravings; plate V has been printed in reverse.

VERY SCARCE. The type in the imprimatur, which is between strips of ornaments of different design, has been reset with slight alterations, otherwise the same printed sheets have been used with a new title-page.

REFERENCES: Keynes, *Bibliography of Dr. Robert Hooke*, 1960: no. 7. • Lisney, *Bibliography of British Lepidoptera*, 1960: no. 39. • Wing: H-2621.

2321. — English, 1745 [2nd edition, issue A].

Micrographia Restaurata: Or, the Copper-Plates of Dr. Hooke's Wonderful Discoveries by the Microscope, Reprinted and fully Explained: Whereby the most Valuable Particulars in that Celebrated Author's *Micrographia* Are brought together in

a narrow Compass; and Intermixed, occasionally, with many Entertaining and Instructive Discoveries and Observations in Natural History. [rule] *Rerum Natura nusquam magis quam in minimis tute est*. Plin. Hist. Nat. Lib. xi. C. z. [rule] [zooodcut device] [double rule] London: Printed for and Sold by John Bowles, Printseller at the Black Horse in Cornhill. Sold also by R. Dodsley, in Pallmall, and John Cuff, Optician, in Fleetstreet. MDCCXLV.

2°: [A]² B-R² χ¹ S²; 37ℓ. VERY SCARCE.

CONTENTS: [A]1r, Title page.; [A]1v, Blank.; [A]2r-[A]2v, Preface; [1]-65, Text with errata under printer's ornament at bottom of 65.; [66], Blank; S1r-S2v, Index.

PLATES: As in no. 39 omitting plates I, IV, VI, XXXVII and XXXVIII. Each plate and figure is numbered as before but the latter is also accompanied by a name and description and the appropriate page number for reference. Seven of the original plates, which had been lost, were replaced by exact copies.

REFERENCES: Keynes, *Bibliography of Dr. Robert Hooke*, 1960: no. 10. • Lisney, *Bibliography of British Lepidoptera*, 1960: no. 40.

2322. — English, 1780 [2nd edition, issue B].

Microscopic Observations; Or, Dr. Hooke's Wonderful Discoveries by the Microscope, Illustrated by Thirty-three Copper-plates, curiously engraved: Whereby the most valuable Particulars in that Celebrated Author's Micrographia Are brought together in a narrow Compass; . . . [double rule] London: Printed for Robert Wilkinson, at N°. 58, in Cornhill. MDCCCLXXX.

2°: [A]² B-R² χ¹ S²; 37ℓ. VERY SCARCE.

CONTENTS: [Same].

REFERENCES: Keynes, *Bibliography of Dr. Robert Hooke*, 1960: no. 11. • Lisney, *Bibliography of British Lepidoptera*, 1960: no. 41.

HOOKER, William Jackson. (BORN: Norwich, Norfolk, England, 6 July 1785; DIED: Kew, Surrey, England, 12 August 1865) *English botanist*.

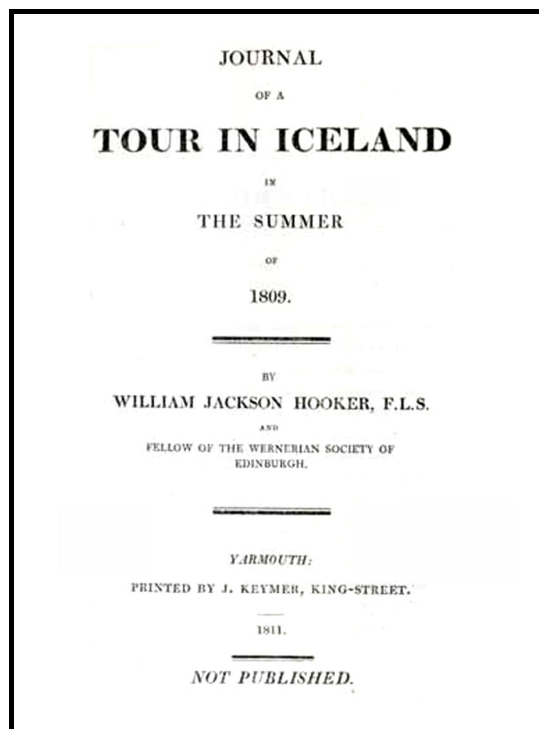
REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 569, 200-231. • Boase, *Modern English Biography*, 1892-1921. • *Catalogue of Portraits of Naturalists*: 597 [14 portraits listed]. • WBI.

2323. — English, 1811 [First edition].

Journal | of a | Tour In Iceland | in | The Summer | of | 1809. | [double rule] *By | William Jackson Hooker, F.L.S. | And | Fellow Of The Wernerian Society Of | Edinburgh. |* [double rule] *Yarmouth: | Printed by J. Keymer, King-Street. |* [short rule] *1811. |* [double rule] *Not Published.*

8°: lxii, 496, [7] p., colored frontispiece, illustrations, 2 plates (one folding).

RARE. Published in only 500 copies, this privately circulated edition of Hooker's *Journal* describes the natural wonders of the island of Iceland, and most particularly the botany of that remarkable land. Of independent means, Hooker was able to travel and to take up as a recreation the study of natural history, especially ornithology and entomology; however, he



JOURNAL, 1811

subsequently confined his attention to botany. In the summer of 1809 he made his first botanical expedition to Iceland, but the natural history specimens which he collected, together with his notes and drawings, were lost on the homeward voyage through the burning of the ship, and the young botanist himself was lucky to escape with his life. His good memory, however, allowed Hooker to publish an account of the island, and of its inhabitants and flora as *Journal of a Tour in Iceland*, which was privately circulated in 1811, and reprinted in an expanded edition in 1813.

REFERENCES: BL. • LKG: XIV 45.

2324. 2nd edition, 1813: *Journal of a tour in Iceland in the summer of 1809.* By William Jackson Hooker ... 2nd edition, with additions ... London, Printed for Longmann, Hurst, Rees, Orme, and Brown, 1813.

2 vols. [VOL 1] 8°: [6], vi, cvi, 369 p., frontispiece (hand-colored). [VOL 2] 8°: [2], 391, [15] p., 3 maps and 4 plates (many folding).

VERY SCARCE. Enlarged second edition, including maps and plates not present in the first edition. Contains a list of Icelandic plants, large sections on volcanoes, geysers, etc.

Appendices: A. Detail of the Icelandic revolution in 1809. B. Proclamations, letters, and other documents, relative to the Icelandic revolution. C. Account of Heckla; with ... other remarkable volcanic mountains of Iceland. D. Odes and letters presented by the literati of Iceland to the Right Honorable Sir Joseph Banks and the Honorable Captian Jones. E. Icelandic plants. F. Danish ordinances concerning the trade of Iceland by land and sea.

REFERENCES: LKG: XIV 45b. • NUC.

HOOKE, Worthington. (BORN: 1806; DIED: 1867)

American physician & educator.

REFERENCES: ABA: I 780, 163-170. • Adams, *Dictionary of American Authors*, 1904. • *Appleton Encyclopedia of American Biography*. • Drake, *Dictionary of American Biography*, 1872. • *Herringshaw's National Library of American Biography*. • *National Cyclopaedia of American Biography*. • WBI.

2325. — English, 1865 [First edition].

Science | For The | School And Family. | Part III. | Mineralogy And Geology. | By | Worthington Hooker, M.D., | [...3 lines of titles and memberships...] | Illustrated with nearly Two Hundred Engravings. | New York .. Cincinnati .. Chicago | American Book Company.

8°: [i]-[viii], [9]-360, [8] p., 181 illus. PAGE SIZE: 182 x 114 mm.

CONTENTS: [i-ii], Title page, verso "Entered, according to Act of Congress, in the year one thousand | eight hundred and sixty-five,..."; [iii]-vi, "Preface."—dated January 1865.; [vii], "Contents."; [ix], Blank.; [9]-325, Text.; [326], Blank.; [327]-350, "Questions."; [351]-352, "Glossary."; [353]-360, "Index."; [8 pgs], Advertisements.

VERY SCARCE. Issued as the third in a series of elementary science textbooks written by Hooker, this is a good utilitarian approach to the geological sciences of the mid-19th century, with some mineralogical content.

"The book is intended to meet the wants of beginners in the study of geology, and especially young beginners. ... My object has been to produce a text-book fitted to prepare those who are wholly unacquainted with the subject for the farther study of it in the books of professed geologists."—*Preface*.

Chapters: 1. Mineral Substances. 2. Construction of minerals. 3. Carbon and its compounds. 4. Sulphur and its compounds. 5. Metals and their ores. 6. Oxy-salts and haloid salts. 7. Earthy minerals. 8. Rocks. 9. The earth as it is. 10. Present changes in the earth. 11. Construction of the earth. 12. Record of life in the rocks. 13. Azoic age. 14. Age of mollusks. 15. Age of fishes. 16. Age of coal. 17. Age of reptiles. 18. Age of Mammals. 19. Age of man. 20. Concluding Observations.

REFERENCES: NUC. • *USGS Library Catalog*.

HOOSON, William. *English lexicographer.*

REFERENCES: Allibone, *Dictionary of English Literature*, 1859-71. • BBA: I 570, 118. • WBI.

2326. — English, 1747 [First edition].

The | Miners Dictionary. | Explaining | Not only the Terms used by Miners, | But also Containing | The Theory and Practice | Of that most Useful | Art of Mineing, [sic] | More especially of | Lead-Mines. | I. How a Gentleman may know whether He has Mines | in his Land, or not. | II. How he may know the cheapest and best Way to come at | Them. | III. The Method of carrying Them on, in order | to make them Profitable Works. | Together with a large Account of all necessary Materials | that are required, conducive thereto. | The Whole being ver great Use to all Miners | and Gentlemen, who have Miners in their own Lands, | and all such as are concern'd in Mines. | Being Observations

made by the Author, | from more than Forty Years Practice and Experience, | at the Mines in the High and Low Peak in Der- | byshire, Shropshire, South and North-Wales, and the North | of England. | [rule] | By William Hooson, | A Derbyshire Miner. | [rule] | Printed for the Author, and T. Payne, | Bookseller in Wrexham. | MDCCXLVII.

8°: π^6 A-Y⁴ [a]⁴ b-d⁴; 115 ℓ .; [230] p. No pagination. PAGE SIZE: 200 x 120 mm.

CONTENTS: $\pi 1$, Title page, verso blank.; $\pi 2r$, Dedication, signed William Hooson.; $\pi 2v$, "The | Preface."; $\pi 3r$ - $\pi 3v$, "A | List | Of the | Subscribers."; A1r-Y4v, [a1r], Text.; [a1v]-[a2r], "The following Discourse is Inscribed to that | Honest and well Experienced Miner | John Staley, of Toulgrave, in Derbyshire."; [a2r]-d4v, "An | Appendix, | Concerning | The three Propositions in the Title | Page."

VERY RARE. The only edition, produced for just 48 subscribers, and totaling only 70 copies. Hooson was a practical Derbyshire miner, and although some of the terms and definitions are in a dialect particular to the period and location, there is never the less a great deal of practical information concerning the mining practices in the lead mines of Derbyshire of the time. Of consequence to mineralogy are the terms and definitions Hooson gives various mineral forms encountered during mining.

Facsimile reprint, 1979: *The miner's dictionary. explaining not only the terms used by miners, but also containing the theory and practice of that most useful art of mineing, more especially of lead mines ... being observations made by the author from more than forty years practice and experience at the mines in the High and Low Peak in Derbyshire, Shropshire, South and North Wales and the North of England.* by William Hooson. Ilkley, Scolar Press for the Institution of Mining and Metallurgy, 1979. [BL, X.958/934.]

REFERENCES: BL: [953.c.17.]. • LKG: VIII 2. • Michael Phelps, Bookseller: cat. 43, no. 273 (1992). • Zeitlinger & Sothoran, *Bibliotheca Chemico*, 1921-52: Suppl. 2, no. 14120.

HOPPE, Tobias Conrad. (BORN: Nordhausen, Germany, 12 May 1697; DIED: Gera, Germany, 9 December 1778) *German apothecary.*

Hoppe was educated at the Gymnasium in Arnstädt. About 1745 he established with a brother an apothecary shop in Gera, that operated for more than 40 years.

REFERENCES: *Deutsche Apotheker Biographie Supplement I*: p. 202-3. • Hundt, R., "Tobias Conrad Hoppe. Ein Geraer Geologe aus dem 18 Jahrhundert," *Beträge Geschel. der Stadt Gera*, Gera, 1937, p. 406-14. • Meusel, *Verstorbenen Deutschen Schriftsteller*, 1802-16: 6, 106. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: p. 150.

2327. — German, 1745.

Kurtze Beschreibung versteinerner Grypliten, dass solche zurückgebliebene Zeugen der allgemeinen Sündfluth sind, nebst anderer Fossilien so hier in Gera befindlich sind ... Gera, 1745.

4°: [8], 28 p.

VERY SCARCE. LKG: XVII 145. First edition.

REFERENCES: LKG: XVII 145.

2328. — German, 1748.

Bericht von dem ohnlängst in Chursächsischen

Landen entdeckten Filtrir-Steine ... In einem Sendschreiben ... Leipzig, 1748.

4°: 8 p. VERY RARE.

REFERENCES: BL: [B.397.(18.)]. • LKG: XIV 194 & XVI 394. • NUC: [no copy listed].

HOPPING, Roy. *American mineral dealer & collector.*

For a few years, Hopping operated his own New York City mineral store on Dey street. He issued several small catalogs and bulletins. Eventually, he merged with WILLIAM NIVEN to form the firm of Niven and Hopping of New York City during the 1890s. He is listed in the *Naturalists' Directory* of 1894 as a collector of minerals, crystals and butterflies.

REFERENCES: *Naturalist's Directory*: 1894-1895.

2329. — English, 1899 [Sale catalog].

Catalogue and price list of minerals. New York, Roy Hopping, 1899.

8°: 65 p., illus. VERY RARE.

REFERENCES: NUC. • *USGS Library Catalog*.

HORN, Johann Bernhard. *German metallurgist & chemist..*

REFERENCES: DBA: I 569, 34. • Jöcher, *Gelehrten-Lexikon*, 1750-51. • WBI.

2330. — German, 1690.

Johann Bernhard Horns | Chym. & Metall. Cult. | Synopsis Metallurgica | oder | Kurtze/ jedoch deutliche Anleitung | zu der höchst nütz- und ergänzlichen | Edlen | Prober=Kunst | verfasst | in | XV. Tabellen. | Darauß ein Liebhaber der Kunst solche mit | leicht= und geringer Mühe gründlich erlernen | und begreifen kan. | Auf ersuchen des Autoris flei= | sigst durchsehen/ und folglich auf gutbefin= | den nebst einer Anrede an den Leser/ denen Freun= | den der Berg-Wercke/ Ertzschmeltzens und Pro= | biren zu Lieb/ Dienst und Gefallen | zum Druck befördert. | Durch | D. David Kellnern, | [...4 lines of titles and memberships...] | In verlegung Johann Christoph Weidners | Buchh. 1690.

8°: 22, [28], 104, [2] p., one folding plate. Title in red and black.

RARE. A short treatise describing metallurgy, especially its assay techniques that are outlined in 15 tables. It was brought out by DAVID KELLNER.

REFERENCES: BL: [972.d.4.]. • VD17: 39:117831P.

HORNEJUS (Horneius, Horney, Horne), Conrad.

(BORN: Braunschweig, Germany, 25 November 1590; DIED: Helmstädt, Germany, 26 September 1649) *German theologian & philosopher.*

Hornejus was a Lutheran and an expert on ancient philosophy.

REFERENCES: ADB: 13, 148-9. • *Biographisch-Bibliographisches Kirchenlexikon*: 2, cols. 1062-1063. • NDB: 9, 637-8. • Volkmann, R., "Professor Konrad Hornejus. Philosoph u. prot. Theologe an d. Univ. Helmstedt," *Aus unserer Heimat* (Helmstedt), nr. 7/8 (1974), p. 6ff. and nr. 9/10 (1975), p. 2ff.

2331. — Latin, 1618 [Dissertation].

Disputationvm Physicarvm | Decima, | De |
Metallis Et | Medijs Minera- | libvs, | Cuiua These
| Auspicio diuini numinis | In illustri academia Iulia
| Praeside | M. Conrado Horneio | Brvnsvicensi,
| Ad diem XV. Kal. Aprilis | Defendere conabitur
| Ioannes Christenivs | Holsatus. | [ornament] |
Helmastadi, | Typis hæredum Iacobi Lvci. | [rule]
| cl5 l5 cXIIIX.

4°: A-C⁴; 12ℓ.; [24] p.

CONTENTS: [1 pg], Title page.; [1 pg], Dedication.;
[22 pgs], Text.

VERY RARE. Defended by Johannes Christenius
[-], this short dissertation presented
on 15 April 1618 describes the rôle of metals and
minerals in medical treatments. It was presented at
the University of Helmstedt, and was incorporated into
Hornejus' *Compendium Natvralis Philosophiæ* (1st ed.,
Helmastadi, 1618).

REFERENCES: BL. • VD17: 12:174184N.

2332. — Latin, 1618 [First edition].

Conradi Horneii Brunsvicensis Compendium Nat-
uralis Philosophiæ Quo Explicantur disputation-
ibus XIII. non tantum quæ vulgo ex Aristot.
eiusque interpp. tradi hic solent, sed præterea
doctrina de lapidibus, metallis, & medijs miner-
alibus, deque plantarum caussis & adfectionibus;
Obiter etiam examinantur libb. IIX. schol. phys. P.
Rami, earumque incredibilis absurditas ad oculum
demonstratur. Helmaestadi[i], Lucius, 1618.

4°: 137ℓ. EXTREMELY RARE.

REFERENCES: BL. • VD17: 23:641234Y.

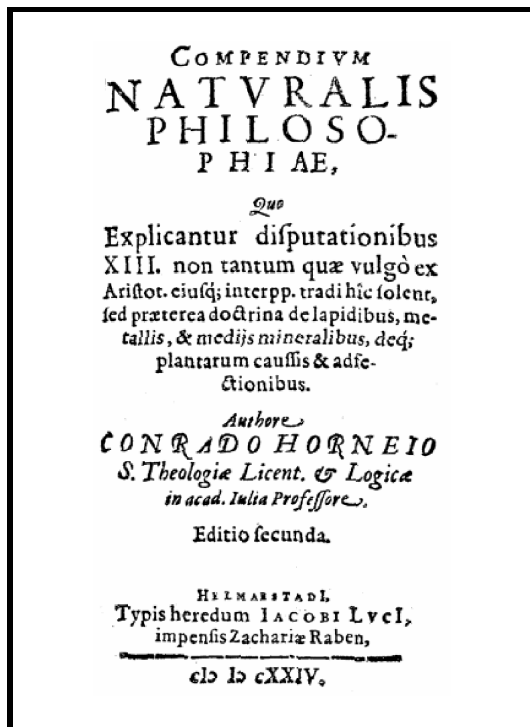
2333. — Latin, 1624 [2nd edition].

Compendium | Natvralis | Philoso- | phiæ, | Quo
| Explicantur disputationibus | XIII. non tantum
quæ vulgò ex | Aristot. eiusq; interpp. tradi hîc
solent, | fed præterea doctrina de lapidibus, me-
| tallis, & medijs mineralibus, deque | plantarum
caussis & adfe- | ctionibus. | Authore | Conrado
Horneio | S. Theologiæ Licent. & Logicæ | in acad.
Iulia Professore. | Editio secunda. | Helmarstadi.
| Typis heredum Iacobi Lvci, | impensis Zachariæ
Raben, | [rule] | cl5 l5 cXXIV.

8°: [16], 477, [2] p.

VERY RARE. Hornejus' *Compendium of Natural
Philosophy* collects together and reprints 13 disserta-
tions that he had presided over. These writings all
commented, elaborated and expanded upon the ancient
theories of Aristotle. Besides descriptions of Aristotle's
views on metaphysics, ethics and logic there is included
the 1618 dissertation that described the medical uses of
metals, stones and minerals that Johannes Christenius
defended. There are also included substantial material
on the uses of plants and animals.

REFERENCES: BL: [no copy listed]. • Gatterer,



COMPENDIUM NATURALIS PHILOSOPHIAE, 1624

Mineralogischen Literatur, 1798-9: 1, 24. • LKG: III 45. •
NUC: [no copy listed]. • VD17: 39:132339G.

2334. — Latin, 1650 [Another edition].

Compendium | Natvralis Phi- | losophiæ, | Quo
| Explicantur disputationibus XIII. | non tantum
quæ vulgò ex Aristot. eiusque in- | terpp. tradi
hîc solent, fed præterea doctrina de lapi- | dibus,
metallis, & medijs mineralibus, deque | plantarum
caussis & adfectio- | nibus. | Authore | Conrado
Horneio SS: | Theologiæ D. & P.P. in Acad. Iulia.
| [ornament] | Francofurti, | Typis Antonii Hvmmii.
| Impensis Johannis Hüttneri. | [rule] | M. DC. L.
8°:): (4 A-T⁸ V³; 159ℓ.; [8], 310 p. Head and tail
pieces, initials.

RARE. A reprint of the earlier editions with the
text reset.

REFERENCES: BL: [1135.d.16.]. • LKG: III 45. • NUC:
[no copy listed]. • VD17: 39:135064L.

HORNSTEIN, Ferdinand Friedrich.**2335. — German, 1872** [First edition].

Kleines Lehrbuch der Mineralogie unter Zugrun-
delegung der neueren Ansichten in der Chemie für
den Gebrauch an höheren Schulen bearbeitet von
Ferdinand Friedrich Hornstein ... Kassel, Fischer,
1872.

8°: v, 256 p., 4 plates, illus.

VERY SCARCE. This small textbook of mineralogy is a good introduction to the science, and providing the reader with a good foundation to the chemical background of the science. It was written as a school book to be used in the high schools of Germany.

REFERENCES: NUC: 255, 214 [NH 0528359].

2336. 2nd edition, 1875: Kleines Lehrbuch der Mineralogie unter Zugrundelegung der neueren Ansichten in der Chemie für den Gebrauch an höheren Schulen. Bearbeitet von Ferdinand Friedrich Hornstein ... 2. vermehrte und verbesserte Auflage. Kassel, Fischer, 1875.

8°: vi, 320 p., illus. VERY SCARCE.

REFERENCES: NUC: 255, 214 [NH 0528360].

2337. 3rd edition, 1882: Kleines Lehrbuch der Mineralogie unter Zugrundelegung der neueren Ansichten in der Chemie für den Gebrauch an höheren Schulen. Bearbeitet von Ferdinand Friedrich Hornstein ... 3. vermehrte und verbesserte Auflage. Kassel, Fischer, 1882.

8°: xi, 352, 22 p., 263 illus., 5 plates. VERY SCARCE.

REFERENCES: NUC: [no copy listed].

2338. 4th edition, 1886: Kleines Lehrbuch der Mineralogie. Unter Zugrundelegung der neueren Ansichten in der Chemie für den Gebrauch an höheren Schulen. Vierte vermehrte und verbesserte Auflage. Mit 269 Abbildungen, 55 im Text, die übrigen auf 5 Tafeln vereinigt. Berlin, Verlag von Theodor Fischer, 1886.

8°: x, 411 p., one color plate, illus. VERY SCARCE.

REFERENCES: NUC: 255, 214 [NH 0528361].

2339. 5th edition, 1898: Kleines Lehrbuch der Mineralogie unter Zugrundelegung der neueren Ansichten in der Chemie für den Gebrauch an höheren Lehranstalten Bearbeitet von Ferdinand Friedrich Hornstein ... 5., vermehrte und verbesserte Auflage. Cassel, Verlag von Ernst Hühn, 1898.

8°: xi, 457 p., one color plate, illus. VERY SCARCE.

REFERENCES: NUC: 255, 214 [NH 0528362].

HOŘOVSKÝ, Eduard.

2340. — German, Czech & Russian, 1890.

Deutsch-böhmisch-russisches Berg- und Hüttenmännisches Wörterbuch. Enthaltend die wissenschaftlichen u. technischen Ausdrücke aus dem Bereiche der Mineralogie, Geologie, anorganischen Chemie, Berbau-, Aufbereitungs- und Hüttenkunde, Berg- und Hüttenmaschinenlehre, Metallurgie ... zusammengestellt von Eduard Hořovský ... Prag, Druck von J. Otto, 1890.

4°: xi, 449 p.

VERY SCARCE. A technological dictionary listing equivalent terms in the German, Czech and Russian languages that concern mining, milling, metallurgy, geology, mineralogy, assaying, inorganic chemistry, etc.

REFERENCES: BL: [12976.k.41.].

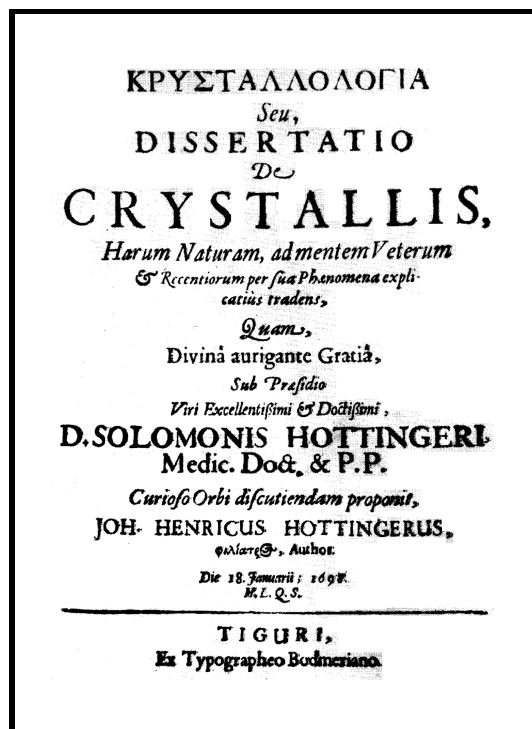
HORTUS SANITATIS.

See: **Herbals.**

HOTTINGER, Johann Heinrich. (BORN: 1680; DIED: Zurich, Switzerland, 1756) *Swiss physician.*

Swiss physician. Hottinger had a medical practice in Zürich and was a member of the Leopoldinae Academie.

REFERENCES: *Nouvelle Biographie Générale* (Hoefer). • Poggendorff: 1, col. 1148.



KRYSTALLOGIA, 1698

2341. — Latin, 1698 [Dissertation].

KRYSTALLOGIA | Seu, | Dissertatio | De | Crystallis, | Harum Naturam, ad mentem Veterum | & Recentiorum per sua Phæomena expli- | catius tradens, | Quam, | Divinâ aurigante Gratiâ, | Sub Præsidio | Viri Excellentissimi & Doctissimi, | D. Solomonis Hottingeri | Medic. Doct. & P.P. | Curioso Orbi discutiendam proponit, | Joh. Henricus Hottingerus, | [Greek word], Author. | Die 18. Januarii; 1698 | H.L.Q.S. | [rule] | Tiguri, | Ex Typographeo Bodmeriano.

4°: π^1 A-E⁴ F²; 23ℓ.; [2], 1-44 p., one plate (showing various crystal specimens and diagrams).

CONTENTS: [2 pgs], Title page, verso blank.; 1-44, Text.

EXTREMELY RARE. At the age of 18, Johann Heinrich Hottinger authored and was respondent to this dissertation over which his uncle, Samuel Hottinger, presided. At the time, the Collegium Carolinum in Zurich was one of the great educational institutions of Europe, and it is perhaps through the influence of it famous professor, JOHANN JACOB SCHEUCHZER, that Hottinger was inspired to write this crystallography. In it, he gives a history and etymology of the term "crystal," classifies specimens according to external form, makes observations on crystal habit and concludes that crystals grew from solution. References are given throughout the text to contemporary literature.

German translation, 1946: Die Krystallogia | Von

HOUTTUYN

Johann Heinrich Hottinger | (1698) | Herausgegeben und kurz erläutert von | P. Niggli | (nach einer Übersetzung von H. Niggli und unter | Mitwirkung von J. Schroeter und W. Rüegg) | 1946 | Verlag H.R. Sauerländer & Co., Aarau.

Scarce. Translation by Hedwig Niggli and published as *Publ. Soc. Suisse Hist. Méd. Sci. Nat.*, Aarau, 14, 100 p., 2 plates.

Samuel Hottinger. (BORN: Zurich, Switzerland, 6 June 1649; DIED: Zurich, Switzerland, 27 October 1713) *Swiss physicist.* Swiss physicist. Hottinger was professor of physics at the Gymnasium in Zurich from 1691 until his death.

REFERENCES: BL. • LKG: XVI 121. • Marx, *Geschichte der Crystallkunde*, 1825: 71. • Sarjeant, *Geologists*, 1980: 2, 1302-3. • VD17: 1:091867B. (**Hottinger**) *Nouvelle Biographie Générale* (Hoefler). • Poggendorff: 1, cols. 1147-8.

HOUGHTON, Thomas. *English author.*

An English writer on mining and legal matters.

REFERENCES: BBA: I 575, 339. • Watt, *Bibliotheca Britannica*, 1824. • WBI.

2342. — English, 1681 [First edition].

[Contained within a single rule box:] Rara Avis in Terris: | Or The | Compleat Miner, | In two Books; | The first containing, | The Liberties, Laws and Customs | of the Lead-Mines, | within the Wapentake of Wirksworth | in Derbyshire; in fifty nine Articles, | being all that ever was made. | The second teacheth, | The Art of dialling and levelling Grooves; | a thing greatly desired by all Miners; being a | subject never written on before by any. | With an Explanation of the Miners Terms of Art | used in this Book. | Unius Labor, multorum laborem allevare. | [rule] | By Thomas Houghton. | [rule] | London: | Printed for William Cooper at the Pelican | in Little Brittain 1681.

12°: A-E¹² F⁵; 65ℓ.; [8], [1]-105, [17] p. Diagram (p. 102). Title within rules.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], "To All | Miners | ..."; [1 pg], "Ad Amicum suum | valde Ingenium."—signed Robertus Webster (=poem).; [1 pg], "To his loving Friend Thomas | Houghton" (=poem).; [1]-105, Text, "...Inquisition..."—dated 10 October 1665.; [1 pg], "The last Operation in Dialling."; [4 pgs], "A Table shewing the Con- | tents of the Articles."; [1 pg], "The Contents of the Second | Book."; [1 pg], "Advertisement."; [9 pgs], "An | Explanation | Of The | Miners | Terms of Art | Used in this | Book."; [1 pg], Blank.

VERY SCARCE. "An explanation of the miners term of art used in this book" p. [8]-[16] Table of contents: p. [2]-[6] at end. Errata: p. [6] at end.

REFERENCES: *Freilich Sale Catalog*: no. 257. • Hoover Collection: no. 435. • Wing: H2933.

Rara Avis in Terris: or, the Compleat Miner. (London, 1740).

See: Barba, Alvaro Alonso.

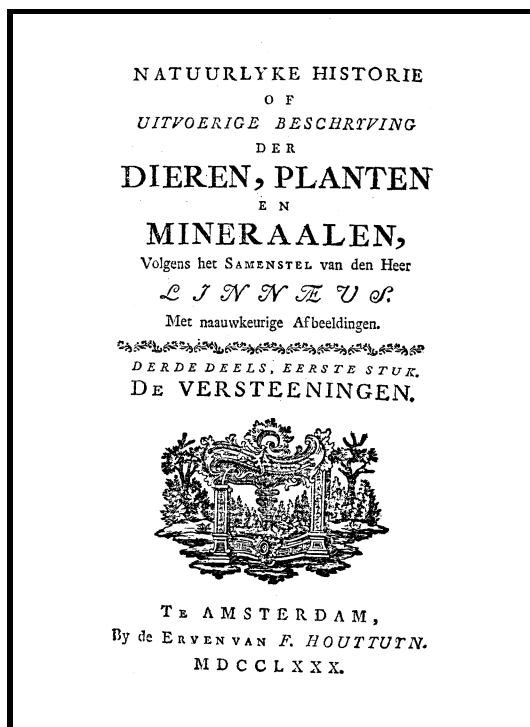
HOUTTUYN, Martinus. (BORN: Hoorn, The Netherlands, 1720; DIED: 1798) *Dutch physician.*

Born the son of Dr. Willem Houttuyn, Martinus studied medicine in Leyden, where he graduated in 1749. After graduation he went to Amsterdam, where he opened a medical practice. He probably was related to the publishing house of Houttuyn in Amsterdam, and through

this connection was introduced to Jan Christiaan Sepp [1739-1811]. Their association caused Houttuyn to produce several important translations.

REFERENCES: Aa, *Biographisch Woordenboek*, 1852-78.

• BAB: 335, 199-206. • *Biografisch Woordenboek Nederland*. • Kobus, *Biographisch Woordenboek*, 1886. • Lambrecht & Quenstedt, *Catalogus*, 1938: 210-1. • Landwehr, *Studies in Dutch Books*, 1976: 54-6. • NNBW. • WBI.



NATUURLYKE HISTORIE ... MINERAALEN, 1780

2343. — Dutch, 1780-5.

Natuurlyke Historie | Of | Uitvoerige Beschryving
| Der | Dieren, Planten | En | Mineraalen, |
Volgens het Samenstel van den Heer | Linnæus.
| Met naauwkeurige Afbeeldingen. | [ornate rule]
| Derdedeels, Eerste Stuk. | De Versteeningen. |
[ornament] | Te Amsterdam, | By de Erven van F.
Houttuyn. | MDCCLXXX [-MDCCLXXXV].

5 vols. [VOL 1: 1780] 8°: π¹ *6 **4 A-3O⁸ 3P⁴; 311ℓ.; [2], [i]-viii, [12], [1]-552 (i.e., 600) p., 12 folding colored plates. [VOL 2: 1781] 8°: *6 A-2X⁸ 2Y²; 360ℓ.; [12], [1]-700, [8] p., 12 plates (numbered XIII-XXIV). [VOL 3: 1782] 8°: *4 A-2R⁸ 2S²; 326ℓ.; [8], [1]-638, [6] p., 10 plates (numbered XXV-XXXIV). [VOL 4: 1784] 8°: *5 A-2H⁸ 2I²; 254ℓ.; [10], 498 p., 7 plates (numbered XXXV-XLI). [VOL 5: 1785] 8°: *4 A-2O⁸ 2P⁵; 212ℓ.; [8], [1]-360, [10], [20], [4], [22] p., 7 plates (numbered XLII-XLVIII).

CONTENTS: [Vol 1] [2 pgs], Title page, verso blank.; [i-ii], Dedication.; [iii]-viii, "Voorrede," signed M. Houttuyn, 30 November 1780.; [2 pgs], Explanation of plates.; [2 pgs],

"Inhoud van dit Stuk."; [8 pgs], "Aanwyzing der Plaaten."; [1]-552, Text (i.e., 600), Text.

[Vol 2] [2 pgs], Title page, verso blank.; [4 pgs], "Inhoud van dit Stuk."; [6 pgs], "Aanwyzing der Plaaten."; [1]-700, Text.; [8 pgs], "Bladwyzer | der | Delfstoffen."

[Vol 3] [2 pgs], Title page, verso blank.; [2 pgs], "Inhoud van dit Stuk."; [4 pgs], "Aanwyzing der Plaaten."; [1]-638, Text.; [6 pgs], "Bladwyzer | der | Steenen."

[Vol 4] [2 pgs], Title page, verso blank.; [4 pgs], "Inhoud van dit Stuk."; [4 pgs], "Aanwyzing der Plaaten."; [1]-498, Text.

[Vol 5] [2 pgs], Title page, verso blank.; [2 pgs], "Inhoud van dit Stuk."; [4 pgs], "Aanwyzing der Plaaten."; [1]-360, Text.; [10 pgs], "Bladwyzer | Der | Mynstoffen."; [20 pgs], "Uittheemsch Register | van de | Naamen | der | Mineraalen."; [168], "Systematischer | Bladwyzer | Der | Planten."; [4 pgs], "Na-Bericht | Van Den Schryver | Der | Natuurlyke Histoire."; [24 pgs], "Korte inhoud | Der Geheele | Natuurlyke Histoire."

PLATES: The engraved plates are by G. Philips after samples contained in Houttuyn's cabinet of animals and minerals.

[Vol III, part 1, Tome 33, plates:] I (p. 203), Zoölithen, ornitholithen, amphibolithen. II (p. 247), Ichtyolithen, entomolithen. III (p. 295), Helmintholithen. IV (p. 333) & V (p. 353), Conchieten. VI (p. 399), VII (p. 443) & VIII (p. 455), Cochlieten. IX (p. 479), Tubiporieten. X (p. 483), Madreporieten, astroiten, fungieten. XI (p. 515), Fungieten, milleporieten. XII (p. 535), Korallieten, alcyonieten.

[Vol III, part 2, Tome 34, plates:] XII (p. 21), Lithoscyala. XIV (p. 35) & XV (p. 47), Phytolithen. XVI (p. 69), Karpolithen. XVII (p. 95) & XVIII (p. 109), Dendrieten. XIX (p. 129), Steenen gegroeid in menschen of dieren. XX (p. 195), Adelaar, kern- of klappersteenen. XXI (p. 253) & XXII (p. 279), Stalachtieten. XXIII (p. 315) & XXIV (p. 351), Turfsteenen.

[Vol III, part 3, Tome 35, plates:] XXV (p. 55), Marmersteenen. XXVI (p. 97), Gips en seleniet. XXVII (p. 119), Kalkspachten. XXVIII (p. 165), Serpentysteen en asbesten. XXIX (p. 231), Keysteenen. XXX (p. 291), Achasten. XXXI (p. 303), Jaspissen. XXXII (p. 333), Kwartdroezen en krystallen. XXXIII (p. 359), Krystaldroezen en schirls. XXXIV (p. 401), Edele steenen & rotssteenen.

[Vol III, part 4, Tome 36, plates:] XXXV (p. 3) & XXXVI (p. 3), Krystallen van zouten, zwavels, steenen en metaalen. XXXVII (p. 211), Barnsteen en zwavelstoffen. XXXVIII (p. 309), Markasieten, kies-kristallen en pyrietten. XXXIX (p. 391), Cinnaber, bruinsteen en antimonie-erten. XL (p. 425), Spiesglas, schirl en veldspaat. XLI (p. 435), Zink-bismuth en kobalt-erten.

[Vol III, part 5, Tome 37, plates:] XLII (p. 13), Tinertsen. XLIII (p. 45), Loodertsen. XLIV (p. 91), Yzerertsen. XLV (p. 129), Yzerhoudende stoffen. XLVI (p. 155), Koperhoudende stoffen. XLVII (p. 229), Zilverhoudende stoffen. XLVIII (p. 259), Zilverertsen en goudhoudende stoffen.

VERY SCARCE. The five volumes described form the complete third and concluding section of the author's well known comprehensive description of the three natural kingdoms. Although the name of Linnæus is invoked in the title, this voluminous publication is, as Soulsby (1933) writes, "only slightly based upon on the *Systema Naturæ* under which it is so often cited, but influenced many similar works in other countries."

As a young man, Houttuyn decided to write an elaborate, well illustrated explanation of Linnæus' natural history method. Realizing that this project would take many years, he took the precaution of building up a large collection of natural history objects.

From this collection, specimens were chosen for illustration to support various points discussed within the body of the work. Publication began in 1761 and was completed 37 tomes and over 22,000 pages later in 1785. The complete work consists of three main parts, namely: zoology (18 vols., 143 plates), botany (14 vols., 105 plates) and mineralogy (5 vols., 48 plates). Each volume is well illustrated with copper plate engravings, and as was typical of the time, either plain or colored versions could be purchased from the publisher.

Mineralogy is covered in what Houttuyn called volume 3, parts 1-5, tomes 33 to 37. The plates are beautifully hand-colored examples of fossils, corals, marbles, stalactites, gypsum, calcite, agates, jaspers, precious stones, and various metallic ores. It ostensibly is based upon the tenth edition of Linneaus' *Systema Naturæ*; however, it is more a compilation than a translation.

REFERENCES: BMC: 2, 880. • *Freilich Sale Catalog*: no. 359. • Landwehr, *Studies in Dutch Books*, 1976: 102-12, no. 82 [gives a detailed description of the entire work. The mineralogical section is covered on pages 111-2]. • Nissen (ZBI): no. 2011. • Soulsby, *Catalogue of the Works of Linneaus*, 1933-6: no. 73.

De Natuurlijke Historie der Versteeningen, of Uitvoerige Afbeelding en Beschryving van de Versteende Zaaken, die tot heden op den Aardbodem zijn ontdekt ... Uit het Hoogduitsch vertaald door M. Houttuyn. (4 vols., Amsterdam, 1773).

See: Knorr, Georg Wolfgang.

HOW, Henry. (BORN: ; DIED: 1879) *Canadian geologist*.

How was Professor of Chemistry and Natural History, University of King's College, Windsor.

2344. — English, 1869.

The | Mineralogy Of Nova Scotia. | A Report | To The | Provincial Government. By | Henry How, D.C.L., | [...5 lines of titles and memberships...] | [double rule] | Halifax, N.S.: | Charles Annand, Publishers, 11 Prince Street. | [short rule] | 1869.

8°: [i]-vi, [2], [1], [1]-217, [1] p. The original cloth is imprinted in gilt on the cover: "Mineralogy | Of | Nova Scotia | 1868 | [rule] | How." PAGE SIZE: 214 x 138 mm.

CONTENTS: [i-ii], Title page, verso blank.; [iii], "Prefactory Letter."—signed Henry How, 1 June 1868.; [iv], Blank.; [v]-vi, "Contents."; [1 pg], "Errata."; [1 pg], Blank.; [1]-217, Text.; [1 pg], Blank.

VERY SCARCE. Printed on a thin paper this is perhaps one of the earliest topographical mineralogies describing the regions of Nova Scotia in Canada. The text begins with a list of publications covering various geological aspects of the area. Then in fifteen chapters the materials of economic mineralogy are covered, i.e. coal, gold, silver, copper, iron and manganese ores, gypsum, limestone, marble, building material, ornamental stones, and mineral waters. Chapter 14 contains a Catalogue of Localities of Minerals throughout the region.

Chapters: I. Introduction, References to Publications on the Minerals of the Province; II. Coal and Allied Minerals; III. Gold; IV. Silver - Argentiferous

HUBERT

Galena - Antimony - Mercury - Molybdenum - Arsenic - Cobalt - Nickel - Bismuth; V. Copper - Ores of Copper - Ore of Lead - Ore of Zinc - Plumbago - Sulphur - Ore of Sulphur; VI. Iron Ores - Mineral Paints; VII. Ores of Manganese; VIII. Gypsum - Anhydrite - Borates - Brine Springs - Salt - Magnesia Alum; IX. Limestones - Marbles - Baryte. s - Moulding Sand - Clays; X. Building Stones - Stones and Materials for Grinding and Polishing; XI. Minerals for Jewellery and Ornamental Purposes not before mentioned; XII. Minerals not mentioned in the foregoing classes and chiefly adapted for the Cabinet; XIII. Mineral Waters; XIV. Catalogue of Localities of Minerals; XV. Notes on the Reservation of Minerals.

REFERENCES: NUC. • *Philosophical Magazine*, 3rd Series: (1870).

HUARD, Auguste. *French crystallographer.*

2345. — French, 1854.

Traité | De | Cristallographie | Par | Auguste Huard. | [rule] | Avec 116 Figures Intercalées Dans Le Texte. | [...2 lines of quotation, signed Shakspeare...] | [ornate rule] | Paris | Borrani Et Droz, Libraires-Éditeurs, | Rue des Saints-Pères, 9. | [rule] | 1854.

12°: π^5 1-96; 59*l.*; [4], [i]-vi, [1]-108 p., illus., tables. PAGE SIZE: 187 x 116 mm.

CONTENTS: [2 pgs], Half title page, "Traité | De | Cristallographie," verso "Corbeil, typ. et str. de Crété."; [2 pgs], Title page, verso blank.; [i]-vi, "Préface."—signed Fédor Thoman, January 1854.; [1]-105, Text.; [106], Blank.; [107]-108, "Table Alphabétique | Des Matières."

VERY SCARCE. An introductory guide to crystallographic science.

REFERENCES: BL: [7105.a.17].

HUBERT, Robert. *English naturalist.*

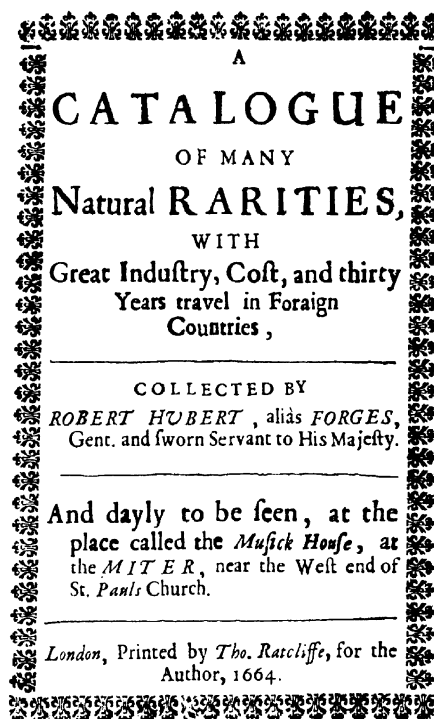
2346. — English, 1664 [Collection catalog].

[Contained within an ornate border:] A | Catalogue | Of Many | Natural Rarities, | With | Great Industry, Cost, and thirty | Years travel in Foreign | Countries, | [rule] | Collected By | Robert Hvbert, aliàs Forges, | Gent. and sworn Servant to His Majesty. | [rule] | And dayly to be seen, at the | place called the Musick House, at | the Miter, near the West end of | St. Pauls Church. | [rule] | London, Printed by Tho. Ratcliffe, for the | Author, 1664.

8°: B-E⁸; 64*l.*; [2], 1-62 p.

CONTENTS: [2 pgs], Title page, verso blank.; 1-34, "A | Catalogue | Of Many | Natural Rarities."; 35-59, "The | Second Part | Of The | Catalogue."; 60-62, "A Catalogue of the Names of those Great | Princes and persons of Quality ..."

RARE. Collection catalog of Hubert's accumulation, collected with great industry, cost and thirty-years travel in foreign countries. He had them exhibited to the public in a place called the "Musick-House, at the Miter, near the West End of St. Paul's Church." In preparation to selling the collection, he published this



CATALOGUE, 1664

catalog, which describes all manner of marvelous natural curiosities. Hubert's scheme worked, and the entire managerie was later purchased by the Royal Society for the bargain price of £100.

The first section of the *Catalogue* describes rare curiosities of human kind, animals, birds, fishes, serpents, and insects, while the second lists vegetables, and metals and minerals (p. 45-59).

REFERENCES: Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 273. • Murray, *Museums*, 1904: 1, 127-8 & 2, 292-3. • Wilson, *History of Mineral Collecting*, 1994: 176 & 214. • Wilson, W.E., "Nehemiah Grew's Musaeum Regalis Societatis, 1681," *Mineralogical Record*, 22 (1991), 333-40: [Hubert treated on page 336].

2347. 2nd edition, 1665: [Contained within an ornate border:] A | Catalogue | Of Many | Natural Rarities, | With | Great Industry, Cost, and thirty | Years travel in Foreign | Countries, | [rule] | Collected By | Robert Hvbert, aliàs Forges, | Gent. and sworn Servant to His Majesty. | [rule] | And dayly to be seen, at the | place called the Musick House, at | the Miter, near the West end of | St. Pauls Church. | [rule] | London, Printed by Tho. Ratcliffe, for the | Author, 1665.

8°: A2-A8 B-E⁸; 39*l.*; [2], 1-76 p.

CONTENTS: [2 pgs], Title page, verso blank.; 1-41, "A | Catalogue | Of Many | Natural Rarities."; 42-68, "The | Second Part | Of The | Catalogue."; 69-71, "A Catalogue of the Names ..."; 72-76, "A Catalogue of the Rarities that are shown to | the Curious, in the University-garden, at Ley- | den in Holland."

RARE. The text is reset and somewhat expanded from the first edition. A short list is added at the end describing the curiosities found in Leyden at the University.

2348. — English, 1666? [Collection catalog].

[Contained within an ornate rule box:] A | Catalogue

| Of part of those | Rarities | Collected in the
thirty years | time with a great deal | Of Pains
and Industry, | by one of his Maje- | sties sworn
Servants. | [rule] | R.H. aliàs Forges, | Gentleman.
| [rule] | They are to be seen at the place | formerly
called the Musique- | House near the West end of
Paul's.

12°: π^1 A¹² B⁵; 18 ℓ .; [2], 1-33, [1] p.

CONTENTS: [2 pgs], Title page, verso blank.; 1-24, "The Names of the Rari- | ties that are to be seen at
| that place, formerly called the | Musique House ..."; 25-
27, "Moreover, The Gentlemen of | these Rarities can shew
thou- | sands of other Rarities of Na- | ture besides the
things afore- | mentioned ..."; 28-33, "A Catalogue of the
Names ..."; [1 pg], Blank.

VERY RARE. An abridged listing derived from the
previous editions.

HÜBSCH, Johann Georg Gotthelf. *German
mathematician.*

Hübsch was an instructor in mathematics at
Schulpforte.

REFERENCES: LKG: p. 291.

2349. — German, 1750.

Sendschreiben von dem bey Auerstadt, neben
Eckardtsberge aus der Erde hervorkommenden
vermeynten Mehle. Schulpforte, 1750.

4°: ?? p., one plate. No copy located. EXTREMELY
RARE.

REFERENCES: Boehmer, *Bibliotheca Historiæ Naturalis*,
1785-9: 4, pt. 1, 192. • Gatterer, *Mineralogischen Literatur*,
1798-9: 2, 50. • LKG: XVI 127.

HUGEN, Christoph Andreas.

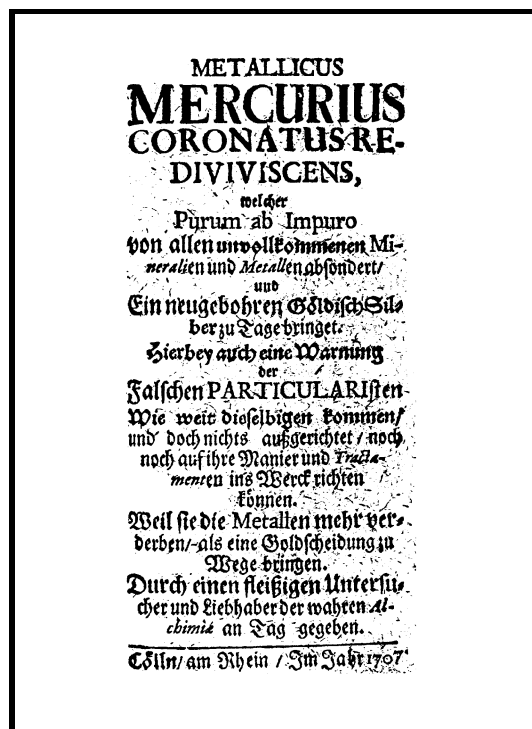
2350. — Latin, 1707.

Metallicus | Mercurius | Coronatus | Re- |
diviviscens, | Welcher Purum ab Impuro | von
allen unvollkommenen Mi- | neralien und Metallen
absondert/ | und | Ein negebohren Göldisch
Sil= | ber zu Tage bringet. | Hierbey auch eine
Warnung | der | Falchen Particularisten | Wie
weit dieselbeigen kommen/ | und doch nichts
außergerichtet / noch | noch auf ihre Manier und
Tracta- | menten ins Werck richten | können. |
Wiel sie die Metallen mehr ver= | derben/ als
eine Goldscheidung zu Wege bringen. | Durch
einen fleißigen Untersu= | cher und Liebhaber der
mahren Al- | chimie an Tag gegeben. | [rule] |
Cölln/ am Rhein / Im Jahr 1707.

8°: A¹² B⁴; 16 ℓ .; [1]-31, [1] p. PAGE SIZE: 130 x
72 mm.

CONTENTS: [1-2], Title page, verso blank.; 3-5, "Ad
Lectorem."; 6-31, Text, on page 31, "Bey herr Christoph
Andreas Hugen/ Kramern und Vierthels=herrn in S.
Annaberg/ Nachricht zu haben."; [1 pg], Blank.

RARE. Published anonymously, the text is signed
at the end by Christoph Andreas Hugen. The text
provides a philosophy and description of the types
of ore found in the German mining centers. It



METALLICUS MERCURIUS, 1707

further describes the use of mercury in extracting
valuable metals from these ore and in particular the
amalgamation of gold. Hugens gives an explanation of
how to examine various ores to determine if treatment
with mercury would be beneficial.

REFERENCES: BL.

HUGHES, Griffith. (BORN: 1707?; DIED: 1758?)
English naturalist.

REFERENCES: Allibone, *Dictionary of English Literature*,
1859-71. • BBA: I 583, 295-300; II 1561, 412-413. • Watt,
Bibliotheca Britannica, 1824. • WBI.

2351. — English, 1750 [First edition].

The | Natural History | Of | Barbadoes. | [rule] | In
Ten Books. | [rule] | By the Reverend | Mr. Griffith
Hughes, A.M. | Rector of St. Lucy's Parish, in the
said Island, and F.R.S. | [rule] | [ornament] | [double
rule] | London: | Printed for the Author; | And sold
by most Booksellers in Great Britain and Ireland.
MDCCL.

4° in 2s: π^2 a-c² A² 2a² B-Cc² *Dd¹ Dd-Rrr² *Sss²
Sss-Mmmm² χ^2 Nnnn-Oooo²; ?? ℓ .; [16], vii, [1], 1-250,
*251.*254, 251-314, [20] p., engraved double-page map
of Barbados, a repeated head-engraving of Bridgetown
and others of fruit and flowers, 30 engraved plates.

CONTENTS: [2 pgs/= π 1], Title page, verso blank.;
[1 pg/= π 2r], Dedication.; [1 pg/= π 2v], Blank.; [10 pgs/=
a1r-c1v], List of subscribers.; [1 pg/=c2r], "Contents."; [1
pg/=c2v], "Authors Quoted."; i-vii (=A1r-2a2r),
"Preface."; [1 pg/=2a2v, Errata.; [Folding map of
Barbados]; [1]-314, Text.; [7 pgs], Explanatory notes.;

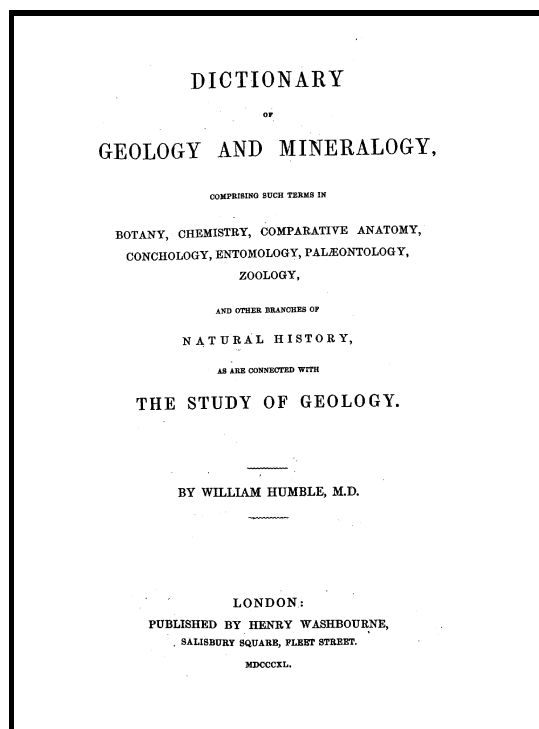
HUMBOLDT

[1 pg], Blank.; [4 pgs], Addenda.; [7 pgs], Index.; [1 pg], Blank.

VERY SCARCE. Hughes, who was Rector of St. Lucy's Parish, lived much of his life in Barbados. He had as his hobby, studying the natural history of this island. The accumulated observations of his life are contained in this beautifully illustrated and much praised work. Among his observations are descriptions of the islands geology and mineralogy.

Facsimile reprint, 1972: *The Natural History of Barbados*. New York, Arno Press, 1972. vii, 314 p., [28] leaves of plates, illus., folding map. [ISBN: 0405032854; Series: Research Library of Colonial Americana.].

REFERENCES: Hunt Botanical Catalog: no. 536. • LKG: XIV 899. • Nissen (BBI): no. 950. • Pritzel, *Thesaurus Literaturæ Botanicae*, 1871-3: no. 4319. • Sabin, *Dictionary*, 1868-1936: no. 33582. • Wood, *Literature of Vertebrate Zoology*, 1931: p. 393.



DICTIONARY OF GEOLOGY AND MINERALOGY, 1840

HUMBLE, William. (BORN: 1797; DIED: 1878) *English physician & geologist.*

REFERENCES: BBA: I 585, 194. • Boase, *Modern English Biography*, 1892-1921. • WBI.

2352. — English, 1840 [First edition].

Dictionary | Of | Geology And Mineralogy, | Comprising Such Terms In | Botany, Chemistry, Comparative Anatomy, | Conchology, Entomology, Palæontology, | Zoology, | And Other Branches Of | Natural History, | As Are Connected With | The Study Of Geology. | [wavy rule] | By William

Humble, M.D. | [wavy rule] | London: | Published By Henry Washbourne, | Salisbury Square, Fleet Street. | MDCCCXL.

4°: π^4 B-Z⁴ 2A-2N⁴; 144ℓ.; [i]-viii, [1]-279, [1] p. PAGE SIZE: 226 x 140 mm.

CONTENTS: [i-ii], Title page, verso "London: | Printed By Stewart And Murray, | Old Bailey."; [iii], Dedication to the Duke of Richmond, Lennox and Aubig, signed William Humble, 27 February 1840.; [iv], Blank.; [v]-viii, Preface.; [1]-279, Text.; [1 pg], "London: | Printed By Stewart And Murray, | Old Bailey."

SCARCE. A comprehensive dictionary in English on the subjects of geology and mineralogy. Included are references to terms in the fields of botany, chemistry, comparative anatomy, conchology, entomology, palaeontology and zoology as they are connected to geology. In the preface, Humble writes that he undertook the compilation of this work because he failed to locate a dictionary containing such technological terms as are peculiar to this branch of science. Since the beginning of the eighteenth century, there had been a great increase in the knowledge of geology, especially in Britain, and these advances had ballooned the nomenclature of the science. Humble's book helped the reading public discover the meaning of these terms. The text is arranged alphabetically, and references are provided for some entries.

REFERENCES: BL. • BMC: 2, 889. • NUC.

2353. 2nd edition, 1843: Dictionary | Of | Geology And Mineralogy, | Comprising Such Terms In | Botany, Chemistry, Comparative Anatomy, | Conchology, Entomology, Palæontology, | Zoology, | And Other Branches Of | Natural History, | As Are Connected With | The Study Of Geology. | [wavy rule] | By William Humble, M.D., F.G.S. | [wavy rule] | Second Edition, With Additions. | [wavy rule] | London: | Published By Henry Washbourne, | Salisbury Square, Fleet Street. | MDCCCXLIII.

8°: [iii]-viii, [1]-294 p. A reprint of the first edition, with the addition of a small appendix. VERY SCARCE.

CONTENTS: [iii-iv], Title page, verso blank.; [v]-viii, Preface.; [1]-279, Text.; 279-294, "Appendix."

REFERENCES: BL. • BMC: 2, 889. • NUC.

2354. 3rd edition, 1860: Dictionary | Of | Geology & Mineralogy: | Comprising Such Terms In | Natural History | As Are Connected With | The Study Of Geology; | By | William Humble, M.D., F.G.S. | [double rule] | London: Richard Griffin And Co.; | Ryde: James Briddon, 7, Cross Street. | [short rule] | MDCCCLX.

8°: [6], [iii]-vii, [1], [1]-470, [2] p. PAGE SIZE: 218 x 140 mm. VERY SCARCE.

CONTENTS: [2 pgs], Title page, verso blank.; [3 pgs], "Names Of Subscribers."; [1 pg], Blank.; [iii]-vii, "Preface."; [1 pg], "Preface To The Third Edition."; [1]-470, Text.; [1 pg], Blank.; [1 pg], Colophon.

REFERENCES: BL. • NUC. • Wheldon & Wesley, Booksellers: cat. 170, no. 1125.

HUMBOLDT, Friedrich Heinrich Alexander, Freiherr von. (BORN: Berlin, Germany, 14 September 1769; DIED: Berlin, Germany, 6 May 1859) *German explorer & scientist.*

Humboldt travelled in Central and South America (1799-1804) and wrote extensively on natural history, meteorology, and physical geography. He proved that the Amazon and Orinoco river systems are connected, and ascended to 5,877 m (19,280 ft) in the Andes, the highest ascent ever made at that time, researching the relation of



HUMBOLDT

temperature and altitude. He spent the next 20 years in Paris writing up his results, returning later to Berlin, where he served at the Prussian court. He wrote a popular work in several volumes, *Kosmos* (1845-62), describing the structure of the Universe as it was then known.

REFERENCES: ABE: I 451, 44-124; II 975, 392-408; II 456, 110-124; III 307, 315-369. • ADB: 13, 358. • Barr, *Index to Biographical Fragments*, 1973: 129. • *Catalogue of Portraits of Naturalists*: 611-2 [37 portraits listed]. • Cleevely, *World Palaeontological Collections*, 1983: 158. • DBA: I 580, 275-318; II G 5, 91-95; 629, 2-74. • *Diccionari Biogràfic*. • *Diccionario Porrúa*. • Drugulin, *Sechstausend Portraits*, 1863: nos. 2644-72. • DSB: 6, 549-55. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Hirsch, *Biographisches Lexikon*, 1884-8. • *ISIS*, 1913-65: 1, 602-5. • Lambrecht & Quenstedt, *Catalogus*, 1938: 214. • Larkin, Robert P. and Gary L. Peters. *Biographical dictionary of geography*. Westport, Ct., Greenwood Press, 1993. xii, 361 p: p. 134-7. • López Piñero, *Diccionario Histórico*, 1983. • NDB: 10, 33-43 [by E. Plewe]. • Poggendorff: 1, cols. 1157-9. • Sarjeant, *Geologists*, 1980: 2, 1317-43, Suppl. 1 (1985) 1, 507-12 & Suppl. 2 (1996), 1, 745-8. • Wagenitz, *Göttinger Biologen*, 1988: 85-6. • WBI. • *World Who's Who in Science*: 842.

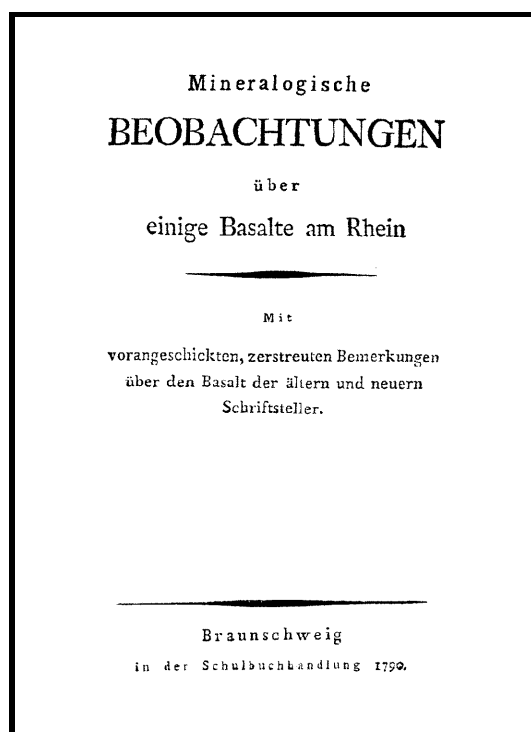
2355. — German, 1790.

Mineralogische | Beobachtungen | über |
einige Basalte am Rhein | [tapered rule] | Mit
| vorangeschickten, zerstreuten Bemerkungen |
über den Basalt der älteren und neuern |
Schriftsteller. | [tapered rule] | Braunschweig | in
der Schulbuchhandlung 1790.

8°: A-G⁸ H7; 63ℓ.; [i]-viii, [2], 11-126 p.

CONTENTS: [i-ii], Title page, verso blank.; [iii], Dedication to Georg Forster.; [iv], Blank.; [v]-viii, "Vorrede."; [9], Sectional title page.; [10], Blank.; [11]-74, Text.; [75], Sectional title page.; [76], Blank.; [77]-122, Text.; [123], "Nachtrag."; [124], Blank.; [125]-126, Text of the Nachtrag.

RARE. Published anonymously, with only the initials, "H-t", at the end of the introduction to indicate the actual author. This is Humboldt's first book written while he was still a student at the Universities of Frankfurt-an-der-Oder and Göttingen and in which he attacks the theories of volcanism but



MINERALOGISCHE BEOBACHTUNGEN, 1790

without fully supporting neptunism. During vacations, Humboldt made several geological excursions to the Harz Mountains and the Rhine and the present book is the result of his observations on basalt. This study foreshadowed Humboldt's life-long interest and investigations of volcanoes and earthquakes which were his most important contributions to geology. Humboldt dedicated the work to Georg Forster, who was the author's guiding influence and role model. Interestingly, the library of the Bergakademie in Freiberg possesses a presentation copy of the book dated 25 July 1790 which had been sent by the author to Werner, who later became Humboldt's most influential teacher.

The text is divided into two major sections. The first reviews the commentary on basalt by old and contemporary authors, with an introductory essay (pp. 11-37). Several subsections follow. The first describes the Syenite of the ancients (pp. 38-40). Another examines the views of Pliny and Strabo on basalt (pp. 41-67), while the file subsection describes the rocks and geology of the ancients (pp. 68-74). The second portion of the book provides Humboldt's observations on the basalt outcrops located along the Rhine river (pp. 77-126).

Facsimile reprint, 1991: *Mineralogische Beobachtungen über einige Basalte am Rhein mit vorangeschickten, zerstreuten Bemerkungen über Basalt der ältern und neuern Schriftsteller*. Freiberg (Sachsen), Bergakademie Freiberg, c1991. 136 p., with new preface. [Library of Congress, QE462.B3 H85 1991].

REFERENCES: BL: [B.259.(2.)]. • DSB: 6, 549-5. •

HUMBOLDT

Göttingische gelehrte Anzeigen: 1790, St. 135, p. 1355 [review]. • *Hamburger Correspondent*: 23 Sept. 1790 [review]. • LKG: XIV 285. • Löwenberg, J., *Alexander von Humboldt: bibliographische Übersicht seiner Werke, Schriften und zerstreuten Abhandlungen*. Stuttgart, Brockhaus, 1960. 68 p. [Bibliography of Alexander von Humboldt]: no. 5. • Ward & Carozzi, *Geology Emerging*, 1984: no. 1134. • Zittel, *Geschichte der Geologie*, 1899: p. 64-7.

2356. — French, [1805]-34.

Voyage | De Humboldt Et Bonpland. | Première Partie. | Relation Historique. | [wavy rule] | Tome Premier. | [wavy rule] | A Paris, | Chez F. Schoell, Rue Des Fossés-Montmartre, N.º 14. | [wavy rule] | 1814.

6 parts bound in 30 vols. 2º: with numerous hand-colored maps and plates. Includes bibliographical references. PAGE SIZE: 525 x 334 mm.

VERY RARE. The famous *Voyage aux Régions Équinoxiales du Nouveau Continent, Fait en 1799-1804* is an account of Humboldt and Aimé Jacques Bonpland [1773-1858] scientific survey of Central and South America. It is not clear if any portion of this huge work contains any mineralogy; however, the 6th part is a famous and rare, richly illustrated botanical work. This massive work was published in 30 volumes over 25 years, describing the natural history, economy, ethnography and archaeology of Cuba and Central and South America. Considered one of the greatest publications in the history of exploration it is today still an important primary source for its contributions to topography, geography, zoology, botany, ethnography and geology. It describes three expeditions to different regions, each with its own scientific objectives:

1. The exploration of the Orinoco River, 16 July 1799 to 24 November 1800, covering 2000 square miles of uncharted and mostly unexplored jungle.

2. Travels to Cuba and through Peru, Colombia and Equador, from 24 November 1800 to 5 December 1802.

3. Researches in Mexico, from 5 December 1802 to May 1804.

The voyages led to many discoveries and scientific by-products, and the participants catalogued and drew 8000 plants, 4000 not previously described. They established the cause of periodic meteor showers, and gave a scientific basis to the geography of the territories visited. The many hand-colored illustrations of the original are today highly sought after.

Contents: 1. ptie. v. 1-3. Relation historique du voyage aux régions équinoxiales du nouveau continent. v. 4-5. Atlas pittoresque du voyage; vues des Cordillères. v. 6. Atlas géographique et physique des régions équinoxiales du nouveau continent. v. 7. Examen critique de l'histoire de la géographie du nouveau continent: analyse de l'Atlas géographique et physique. v. 8. Atlas géographique et physique du royaume de la Nouvelle Espagne.

2. ptie. Recueil d'observations de zoologie et d'anatomie comparée. 2 v.

3. ptie. Essai politique sur le royaume de la Nouvelle Espagne. 2 v.

4. ptie. Recueil d'observations astronomiques, d'opérations trigonométriques et des mesures barométriques. 2 v.

5. ptie. v. 1. Tableau physique des Andes et pays voisins. v. 2. Essai sur la géographie des plantes.

6. ptie. Botanique: Section 1. Plantes équinoxiales. 2 v. Section 2. Monographie des melastomaciées. 2 v. Section 3. Nova genera et species plantarum. 7 v. Révision des graminées. 3 v. Section 4. Mimosa et autres plantes légumineuses.

Facsimile reprint, 1971-3: *Voyage aux Régions Équinoxiales du Nouveau Continent, fait en 1799-1804, &c. Friedrich Heinrich Alexander von Humboldt and Aime Bonpland*. Amsterdam, New York, Theatrum Orbis Terrarum, Da Capo Press, 1971-1973. 30 vols. (20 in Atlas folio and 10 in Royal 4º) with 1470 plates and maps (1240 in colour). This edition is limited to 200 copies and is a reprint of the complete work, "Facsimilé intégral de l'édition de Paris, 1805-1834."

REFERENCES: Löwenberg, J., *Alexander von Humboldt: bibliographische Übersicht seiner Werke, Schriften und zerstreuten Abhandlungen*. Stuttgart, Brockhaus, 1960. 68 p. [Bibliography of Alexander von Humboldt]. • Monglond, *La France Révolutionnaire*, 1930.

2357. — German, 1808.

Ansichten der Natur mit wissenschaften Erläuterungen. Von A. von Humboldt. Tübingen, 1808.

2 parts in one vol. 8º: xiii, 376 p.

VERY SCARCE. Humboldt's favorite book, published in 1808 this contains the author's opinions of nature. It expresses strongly and definitively the proof that experience of nature and scientific realization do not have to be a contradiction. Its overview reaches from the steps of and deserts of the waterfall at Orinoco up to the nocturnal animal life in the jungle. Today, the book is a treasure for geographers, botanists, historians, ecologists, meteorologists and biologists and an early, important work in pure science.

Many reissues, new editions and translations of this book appeared.

REFERENCES: LKG: XIV 921d. • Löwenberg, J., *Alexander von Humboldt: bibliographische Übersicht seiner Werke, Schriften und zerstreuten Abhandlungen*. Stuttgart, Brockhaus, 1960. 68 p. [Bibliography of Alexander von Humboldt].

2358. — French, 1808.

Essai politique sur le royaume de la Nouvelle-Espagne, ouvr. qui presente des recherches sur la géographie du Mexique, sur l'étendue de sa surface et sa dicision politique en interdances, dur l'aspect physique sol, sur sa population actuelle etc. Avec un Atlas fonde sur des observ. astron. Tübingue, 1808.

3 vols. Published as: *Voyage de Humboldt et Bonpland 3. ptie.* VERY SCARCE.

REFERENCES: LKG: XIV 924g. • Löwenberg, J., *Alexander von Humboldt: bibliographische Übersicht seiner Werke, Schriften und zerstreuten Abhandlungen*. Stuttgart, Brockhaus, 1960. 68 p. [Bibliography of Alexander von Humboldt].

2359. First edition, 1823: Essai géognostique sur le gisement des roches dans les deux hémisphères par Alexandre de Humboldt. Paris, F.G. Levrault, 1823.

8º: [i]-viii, [1]-379 p.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, "Préface."; [1]-360, Text.; 361-379, "Tableau."

VERY SCARCE. Subject Petrology. Geology.

2360. English transl., 1823: A geognostical essay on the superposition of rocks, in both hemispheres by Alexander de Humboldt... Translated from the original French. London, Longman, Hurst, Rees, Orme, Brown, and Green, 1823.

8°: [i]-viii, [1]-482 p.

CONTENTS: [i-ii], Half title page, verso blank.; [iii-iv], Title page, verso blank.; [v]-viii, "Preface."; [1]-459, Text.; [460], Blank.; 461-482, "Tablular Arrangement | Of | Formations."

VERY SCARCE. Translation of: Essai geognostique sur le gisement des roches dans les deux hémisphères.

2361. — German, 1889? [Collected works].

Gesammelte Werke | von | Alexander von Humboldt. | Erster Band. | [rule] | Kosmos I. | [ornament] | Stuttgart. | Verlag von J.G. Cotta'schen Buchhandlung.

12 vols. [VOL 1] 8°: [i]-xii, [1]-349 p., frontispiece portrait of Humboldt. [VOL 2] 8°: [4], [1]-366 p. [VOL 3] 8°: [4], [1]-466 p. [VOL 4] 8°: [4], [1]-575 p. [VOL 5] 8°: [i]-xii, [1]-298 p. [VOL 6] 8°: [4], [1]-304 p. [VOL 7] 8°: [4], [1]-294 p. [VOL 8] 8°: [4], [1]-304 p. [VOL 9] 8°: [i]-xi, [1], [1]-312 p. [VOL 10] 8°: [4], [1]-264 p. [VOL 11] 8°: [i]-xii, [1]-362 p. [VOL 12] 8°: [4], [1]-336 p.

CONTENTS: [Vol 1] [Frontispiece portrait of Humboldt]; [i-ii], Title page, verso blank.; [iii-iv], Title page to Kosmos.; [v], Dedication to Kaiser Friedrich Wilhelm IV.; [vi], Blank.; [vii]-xii, "Vorrede."; [1]-349, Text.

[Vol 2] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-366, Text.

[Vol 3] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-466, Text.

[Vol 4] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-575, Text.

[Vol 5] [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-xii, "Vorrede."; [1]-298, Text.

[Vol 6] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-304, Text.

[Vol 7] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-294, Text.

[Vol 8] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-304, Text.

[Vol 9] [i-ii], Blank, verso series title page.; [iii-iv], Title page, verso blank.; [v]-xi, Dedication.; [1 pg], Errata.; [1]-312, Text.

[Vol 10] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-264, Text.

[Vol 11] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [v]-xii, Forword.; [1]-362, Text.

[Vol 12] [2 pgs], Blank, verso series title page.; [2 pgs], Title page, verso blank.; [1]-336, Text.

RARE. The collected writings of Humboldt, presented with essentially no illustrations. This series of volumes was thought to have been published around 1889 in Stuttgart.

REFERENCES: NUC: ??, ??.

HUMPHREY, George. (BORN: 1739?; DIED: 1825) *English conchologist, collector & mineral dealer.*

Chief 'commercial naturalist' in Britain for many years. He was the brother-in-law of the mineral dealer JACOB FORSTER. He inherited the immense conchological and mineralogical collections accumulated by his father. Part of this accumulation was sold at auction during April and May 1779 (see: *Museum Humfredianum*), while another portion was discovered by G.B. Sowerby: J. De Carle Sowerby in *Mineral Conchology*, 6 (1826), p. 3 wrote, "the collection purchased by my brother from the late Mr G. Humphries" and (p. 5) "which has been for many years

unopened when my brother purchased it and disclosed its riches."

REFERENCES: *Ann. Mag. Nat. Hist.*: 16 (1905), no. 7, 262 [by C.D. Sherborn]. • *Bulletin of the British Museum (Natural History)*, *Historical Series*: 6 (1977), no. 1, 5-6. • Chalmers-Hunt, *Natural History Auctions*, 1976: 61. • Cleavelly, *World Palaeontological Collections*, 1983: 158. • Cooper, M.P., "Keeping it in the family: the Humphreys, Forsters and Heulands," *Matrix*, 9 (2001), no. 1, 3-31. • Dance, *Shell Collecting*, 1966. • *Proceedings Malac. Society*: 11 (1915), 307 [by C.D. Sherborn].

2362. — English, 1779 [Sale catalog].

Museum Humfredianum: a Catalogue of the large and valuable Museum of Mr. George Humphrey; which is presumed to be the most capital of the kind ever offered to public Sale in this Kingdom: Comprehending many Thousand of curious subjects in Natural History, collected with great Judgment and Expence, from most Parts of the known World, during a Course of upwards of thirty Years: particularly Shells, Corals, other Marine Productions, Reptiles, Insects, and other Animals ...; most of the Species in the Fossil Kingdom; among them many rare and elegant Spars, Crystals (some of them matchless), Marbles, Agates, and other Stones; Ores and Minerals; Petrifications ...; a Variety of Mahogany and other Cabinets, adapted for containing Subjects in Natural History; a range of elegant Mahogany Cases of the best Jamaica Wood, nine feet high, glazed with large Panes ...; a Mahogany Table, near thirty feet long, with large Show Glasses on the Top, and near 300 Drawers beneath, all glazed, a range of Mahogany Shelves with Cabinets containing 128 Drawers, glazed ... and great Number of other Articles ... Which will be sold by Auction ... on Monday, April 5, 1779, and the Twenty-nine following Days. London, Paterson, 1779.

8°: 168 p.

VERY RARE. Auction catalog listing a large portion of the natural history collections inherited from his father. The catalog contains 4,310 lots, including many minerals. Humphrey was a merchant in shells and minerals at least as early as 1790.

REFERENCES: Chalmers-Hunt, *Natural History Auctions*, 1976: 61. • Engelmann, *Bibliotheca Historico-Naturalis*, 1846: p. 11. • Gatterer, *Mineralogischen Literatur*, 1798-9: 1, 274. • Murray, *Museums*, 1904: 1, 184 & 2, 293. • Wilson, *History of Mineral Collecting*, 1994: 75.

Museum Calonnianum. Specification of the Various Articles which Compose the Magnificent Museum of Natural History Collected by M. De Calonne in France, ... (London, 1797).

See: Calonne, Charles Alexandre De.

HUNT, Thomas Sterry. (BORN: Norwich, Connecticut, U.S.A., 5 September 1826; DIED: New York City, New York, U.S.A., 12 February 1892) *American miner-*



HUNT

alogist, petrologist & chemist.

Hunt lost his father at the age of twelve, and was obliged to earn his own livelihood. In the course of two years he found employment in a printing office, in an apothecary's shop, in a bookstore and as a clerk. He became interested in natural science, and especially in chemical and medical studies and entered Yale. In 1845, Hunt was elected a member of the Association of American Geologists and Naturalists at Yale—a body which in 1849 became the American Association for the Advancement of Science. At Yale, he became assistant to Benjamin Silliman [1779-1864]. In 1846, he was appointed chemist to the Geological Survey of Vermont. Hunt was elected F.R.S. in 1859 and was an original member of the Royal Society of Canada.

REFERENCES: ABA: I 810, 271-294. • *American Chemists & Chemical Engineers*: 1, 237-8 [by D.H. Wilcox, Jr.]. • *American Geologist*: 11 (1893), no. 1, 1-13, portrait. • Barr, *Index to Biographical Fragments*, 1973: 130. • BBA: I 588, 137-142. • *Biographical Memoirs of the National Academy of Science*: 15 (1932), Memoire no. 7, 207-38, portrait [by F.D. Adams]. • Boyle, R.W., "Thomas Sterry Hunt (1826-1892)-Canada's first geochemist," *Proceedings of the Geological Association of Canada*, 23 (1971), 15-8, portrait. • Brown, B.W., "T. Sterry Hunt, the man who brought Walt Whitman to Canada," *Southern Quarterly*, 10 (1971), no. 1, 43-8. • *Bulletin of the Geological Society of America*: 4 (1893), 379-93 [by R. Pumpelly]. • *Can. Rec. Sci.*: 5 (1892), 145-9, portrait. • DAB: 5, pt. 1, 393-4. • *Dictionary of Canadian Biography*. • DSB: 6, 564-6 [by W.H. Brock; other refs.]. • Elliott, *Biographical Index*, 1990: 115. • *Encyclopaedia Britannica*, 11th edition. • *Geologiska Föreningens i Stockholm Förhandlingar*: 14 (1892), pt. 3, 258. • *ISIS*, 1913-65: 1, 607. • Lambrecht & Quenstedt, *Catalogus*, 1938: 214. • Merrill, *First One Hundred Years*, 1924: 246, 367, 410-1, 445-7, 565 & 608. • Poggendorff: 3, 670-2, 4, 647. • *Proceedings of the American Academy of Arts & Sciences*: 19 (1893), 367-72. • *Proceedings of the Royal Society of London*: 51 (1892), p. xxiv-xxvii. • *Proceedings of the American Philosophical Society: Memorial Volume*, 1 (1900), 63-121, portrait [by J. Douglas]. • Sarjeant, *Geologists*, 1980: 2, 1344-5 & Suppl. 2 (1995), 1, 750. • *Science*: n.s., 10 (1899), 708-9. • *Transactions of the American Institute of Mining Engineers*: 21 (1893), 400-10 [by J. Douglas]. • WBI. • *World Who's Who in Science*: 845.

2363. — English, 1886.

Mineral | Physiology and Physiography. | A second series of | Chemical And Geological Essays | with

| A General Introduction. | By | Thomas Sterry Hunt, M.A., LL.D. (Cantab.) | [...7 lines of titles and memberships...] | Boston: | Samuel E. Cassino. | 1886.

8°: [2], [i]-xvii, [1], [1]-710 p.

CONTENTS: [2 pgs], Title page, verso blank.; [i], Dedication to Benjamin Silliman.; [ii], Blank.; [iii], Sectional title page, "Mineral | Physiology And Physiography."; [iv], Blank.; v-xii, "Preface."; [xiii]-xvii, "Contents."; [1 pg], Blank.; 1-686, Text.; 687-688, "Appendix."; [689]-710, "Index."

VERY SCARCE. Hunt came to mineralogy from a chemical background and examined the subject from that stand point. In his *Mineral Physiology and Physiography*, his researches into the chemical and mineral composition of rocks extended the theoretical framework for chemical geology and how it worked with in the earth.

Chapters: I. Nature in thought and language. II. The order of the natural sciences. III. Chemical and geological relations of the atmosphere. IV. Celestial chemistry from the time of Newton. V. The origin of crystalline rocks. VI. The genetic history of crystalline rocks. VII. The decay of crystalline rocks. VIII. A natural system of mineralogy. IX. History of Pre-Cambrian rocks. X. The geological history of serpentines, with studies of Pre-Cambrian rocks. XI. The taconic question in geology. The book is a thorough study if crystalline and metamorphic Rocks. It is as well a study of mineralogy and Precambrian Stratigraphy.

REFERENCES: Dana's 7th (Bibliography): 74. • NUC. • Smith, *Chemistry in America*, 1914: p. 251. • *USGS Library Catalog*.

2364. 2nd edition, 1891: Mineral | Physiology and Physiography. | A second series of | Chemical And Geological Essays | with | A General Introduction. | By | Thomas Sterry Hunt, M.A., LL.D. (Cantab.) | [...7 lines of titles and memberships...] | Second Edition, With New Preface. | Scientific Publishing Company, | New York. | 1891.

8°: [4], [i]-xvi, [xiii]-xvii, [1], [1]-710 p.

CONTENTS: [2 pgs], Blank, verso advertisement.; [2 pgs], Title page, verso "Copyright, 1890, | By Scientific Publishing Co."; [i], Dedication to Benjamin Silliman.; [ii], Blank.; [iii], Sectional title page, "Mineral | Physiology And Physiography."; [iv], Blank.; v-xvi, "Preface."; [xiii]-xvii, "Contents."; [1 pg], Blank.; 1-686, Text.; 687-688, "Appendix."; [689]-710, "Index."

VERY SCARCE. Essentially a reprint of the 1886 edition with a new preface and new publisher.

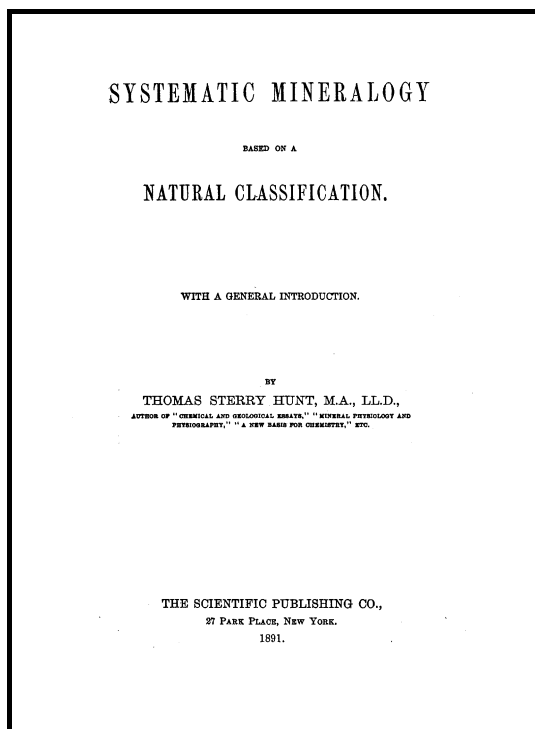
REFERENCES: *American Journal of Science*: 1892, p. 248. • NUC. • NYPL Catalog. • *Science*: 17 (1891), p. 137-8. • *USGS Library Catalog*.

2365. — English, 1891.

Systematic Mineralogy | Based On A | Natural Classification. | With A General Introduction. | By | Thomas Sterry Hung, M.A., LL.D., | Author of "Chemical And Geological Essays," "Mineral Physiology And | Physiography," "A New Basis For Chemistry," Etc. | The Scientific Publishing Co., | 27 Park Place, New York. | 1891.

8°: [i]-xvii, [1]-391, [15] p. PAGE SIZE: 234 x 144 mm.

CONTENTS: [i-ii], Title page, verso "Copyrighted, 1891, By | The Scientific Publishing Company."; [iii], Dedication to James Douglas.; [iv], Blank.; [v]-xii, "Contents."; [xiii]-xvii, "Preface."; [1 pg], Blank.; [1]-375,



SYSTEMATIC MINERALOGY, 1891

Text.; [376], Blank.; 377-379, "General Index."; [380], Blank.; [381]-391, "Index Of Mineral Names."; [1 pg], Blank.; [15 pgs], Advertisements.

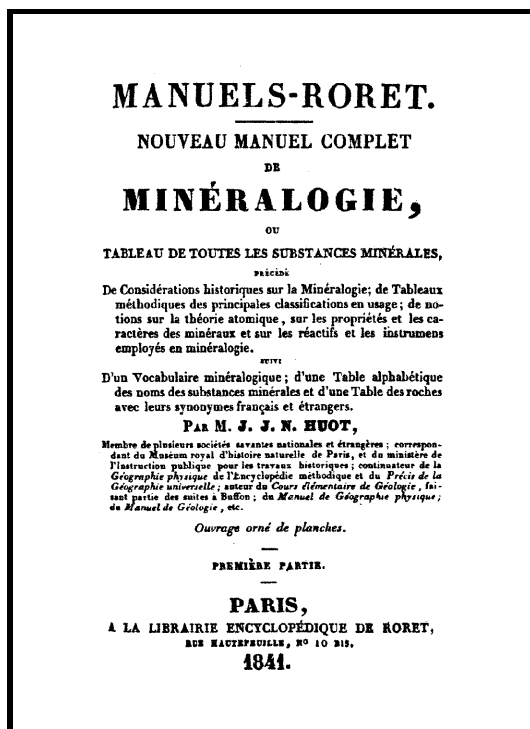
VERY SCARCE. A unique book in many respects and of considerable interest for the "natural history" method the author adopts for mineralogical classification. Remarkably, it advances material that is seldom found in other texts, and, overall, this book should be viewed as a highly interesting and instructive series of essays that give Hunt's ideas on various aspects of mineralogy. An excellent review of other important mineralogical systems of classification is included as are discussions on chemistry, physical properties, formation of minerals, theory of solution, crystallization, chemistry of species, nomenclature, etc. The text concludes with a good index.

REFERENCES: Dana's 7th (Bibliography): 74. • NUC. • USGS Library Catalog.

HUOT, Jean Jacques Nicolas. (BORN: Paris, France, 1790; DIED: Versailles, France, 19 May 1845) *French naturalist & palaenotologist.*

Huot was curator of the library at Versailles and a member of the Société Géologique de France. He authored several elementary works on geology and mineralogy for the curious public.

REFERENCES: ABF: I 528, 244-252. • Hardouin-Michelin, —, *Notice lue à la Société géologique de France, le 16 juin 1845 à l'occasion du décès de Jean Jacques Nicolas Huot.* Paris, 1845. 4 p. • Huot, P., *La vie et les oeuvres de Jean Jacques Nicolas Huot, Continuateur de Malte-Brun.* Versailles, France, 1846. 48 p. • Lambrecht & Quenstedt, *Catalogus*, 1938: 215. • *Nouvelle Biographie Générale* (Hoefer): 25, cols.



MANUEL DE MINÉRALOGIE, 1841

578-9. • Poggendorff: 1, col. 1161. • Sarjeant, *Geologists*, 1980: 2, 1349. • WBI.

2366. — French, 1841.

Manuels-Roret. | [rule] | Nouveau Manuel Complet | De | Minéralogie, | Ou | Tableau De Toutes Les Substances Minérales, | Précède | De Considérations historiques sur la Minéralogie; de Tableaux | méthodiques des principales classifications en usage; de no- | tions sur la théorie atomique, sur les propriétés et les ca- | ractères des minéraux et sur les réactifs et les instrumens | employés en minéralogie. | Suivi | D'un Vocabulaire minéralogique; d'une Table alphabétique | des noms des substances minérales et d'une Table des roches | avec leurs synonymes français et étrangers. | Par M. J.J.N. Huot, | [...7 lines of titles and memberships...] | Ouvrage orné de planches. | [short rule] | Première Partie. | [short rule] | Paris, | A La Librairie Encyclopédique De Roret, | Rue Hautefeuille, n° 10 Bis. | 1841.

2 vols. 774 p., 5 folding plates (one hand-colored).

RARE. This new complete *Manual of Mineralogy* includes descriptions of all the mineral substances, including information on the history of mineralogy, discussions of classification, atomic theory, the properties of minerals, and reagents and instruments employed in mineralogy. A glossary of mineralogical

HÜPSCH-LONTZEN

terminology, together with a table of the names of mineral species and another table of rocks with their French nomenclature is included.

Atlas, 1841: Atlas | De | Minéralogie | Ou | Histoire Naturelle | Des Minéraux; | Composé De 40 Planches, | Représentant la plupart des Minéraux décrits dans | le Manuel de Minéralogie. | [ornate rule] | Paris. | Roret, Libraire, Rue Hautefeuille, Au Coin De Celle Du Battoir.

VERY RARE. This is the title to the atlas of 40 plates that accompanied Huot's *Manuel de Minéralogie* (1st ed., Paris, 1841).

REFERENCES: Dana's 7th (Bibliography): p 74.

HÜPSCH-LONTZEN, Johann Wilhelm Carl Adolph. (BORN: Cologne, Germany, 1726; DIED: Cologne, Germany, 1 January 1805) *German merchant.*

Dealer in natural history and antiques in Köln, alias "Johann Wilhelm Carl Adolph, Baron von Hüpsch, Herr zu Lontzen, zu Krickelhausen und auf der Motte." He owned a substantial personal collections his 'Kunstkabinett' in Cologne attracted numerous visitors. His cabinet of minerals was a frequent source for purchased and traded minerals to Caroline Louise von Baden. He bequeathed this collection to Ludwig X [1753-1810], Langrave of Hessen-Darmstadt, where it is still preserved today in the Hessischen Landesmuseum in Darmstadt.

REFERENCES: Beeh, Wolfgang., *Die Sammlungen des Baron von Hüpsch. Ein Kölner Kunstkabinett um 1800. Ausstellung des Hessischen Landesmuseums ... im Schnütgen-Museum Köln.* 10. August bis 18. Oktober 1964. (Redaktion des Katalogs W. Beeh.) [With illustrations.]. Darmstadt, [1964.]. • DBA: I 578, 239-243. • Hamberger & Meusel, *Gelehrte Deutschland*, 1796-1834. • Neu, Heinrich., *Johann Wilhelm Karl Adolf Baron von Hüpsch, das Lebensbild eines St. Vithers.* St. Vither Volkszeitung, Nr. 71. (6 Sept., 1933). • Poggendorf: 1, cols. 1154-5. • Schmidt, Adolf., *Baron Hüpsch und sein Kabinett: ein beitrage zur geschichte der hofbibliothek und des museums.* Darmstadt, 1906. 295 p. • WBI. • Wilson, *History of Mineral Collecting*, 1994: 176.

2367. — German, 1768.

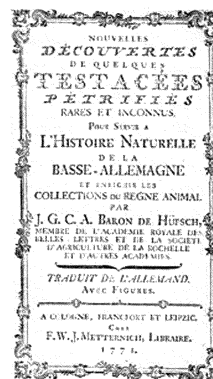
Neue in der Naturgeschichte des Nieder-Deutschlandes gemachte Entdeckungen einiger seltenen und wenig bekannten Schaalthiere : zur Erweiterung und Ergänzung des Thierreichs beschrieben von J. W. C. A. Freyherrn von Hüpsch. Frankfurt, Leipzig, In der Metternichischen Buchhandlung, 1768.

4°: 159 p., 4 folding plates.

VERY RARE. This work concerns fossil mollusks and other shells. It includes accounts of the new species discovered in Eifel in the Duchy of Juliers.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 12, no. 1, p. 310. • *Berlinische Sammlungen*: 2, p. 198. • BL: [B.245.(4.)]. • BMC: 2, p. 887. • Boehmer, *Bibliotheca Historiae Naturalis*, 1785-9: 4b, p. 264. • *Jenaische gelehrte Zeitungen*: 1769, p. 586 & 1771, p. 488. • *Journal encyclopédique*: 1770, 1, p. 75. • *Katalog Bergakademie Freiberg*, 1879: p. 317 [VII. 352.]. • LKG: XVII 147. • Schröter's *Journal für die Liebhaber*: 2., p. 80.

2368. French transl., 1771: [Contained within an ornamental border:] Nouvelles | Découvertes | De Quelques | Testacées | Pétrifiées, | Rares Et Inconnus. | Pour servir à | L'Histoire Naturelle | De La | Basse-Allemagne | Et Enrichir Les | Collections du Regne Animal | Par | J.G.C.A. Baron de Hüpsch, | [...4 lines of titles and memberships...] | [ornate rule] | Traduit del L'Allemand. | Avec Figures. | [ornate rule] | A Cologne, Francfort et Leipsic, | Chez | F.W.J. Metternich, Libraire, | 1771.



NOUVELLES, 1771

8°: 136, [8] p., 4 folding plates. PAGE SIZE: 198 x 120 mm.

VERY RARE. Translation of *Neue in der Naturgeschichte des Niederdeutschlands gemachte Entdeckungen* (Frankfurt und Leipzig, 1768). This beautifully printed treatise has the text contained within an ornamental border. The text is divided into three chapters: (1) Description d'une nouvelle espèce de coquille bivalve pétrifiée rare et inconnue jusqu'à présent découverte dans l'Eifel du Duché de Juliers, (2) Description de quelques Tuyaux cloisonnés pétrifiés récemment découverts et très singuliers, trouvés dans l'Eifel du Duché de Juliers, and (3) Description d'une nouvelle espèce de Coquille bivalve pétrifiée fort singulière, découverte depuis peu dans l'Eifel sur terre du Juliers.

REFERENCES: *Berlinische Sammlungen*: 2, p. 198 & 9, p. 430. • BMC: 2, p. 887. • Boehmer, *Bibliotheca Historiae Naturalis*, 1785-9: 4b, p. 265. • Cobres, *Deliciae Cobresianae*, 1782: 2, 777. • LKG: XVII 148a. • *Mart. Verz.:* no. 2212.

2369. — German, 1771.

Neue Entdeckung des wahren Ursprungs des Cöllnischen Umbers oder der Cöllnischen Erde. Frankfurt und Leipzig, 1771.

8°: 48 p. VERY RARE.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 21, p. 578. • Beckmann *P.O.B.:* 3, p. 445. • *Berlinische Sammlungen*: 9, p. 324. • BL: [B.241.(4.)]. • Boehmer, *Bibliotheca Historiae Naturalis*, 1785-9: 4a, p. 190. • Cobres, *Deliciae Cobresianae*, 1782: 2, 776. • *Göttingische gelehrte Anzeigen*: 1772, p. 872. • *Jenaische gelehrte Zeitungen*: 1773, p. 901. • *Katalog Bergakademie Freiberg*, 1879: p. 317 [VI. 491.]. • LKG: XVI 450.

2370. — German, 1781-1805.

Naturgeschichte des Niederdeutschlandes und anderer Gegenden, nebst häufigen neuen Entdeckungen und Beobachtungen verschiedener seltenen, merkwürdigkeiten und wenig bekannten Naturwerke. Nürnberg, Bey Gabriel Nicolaus Raspe, 1781.

[COVER OF PART TWO READS:]

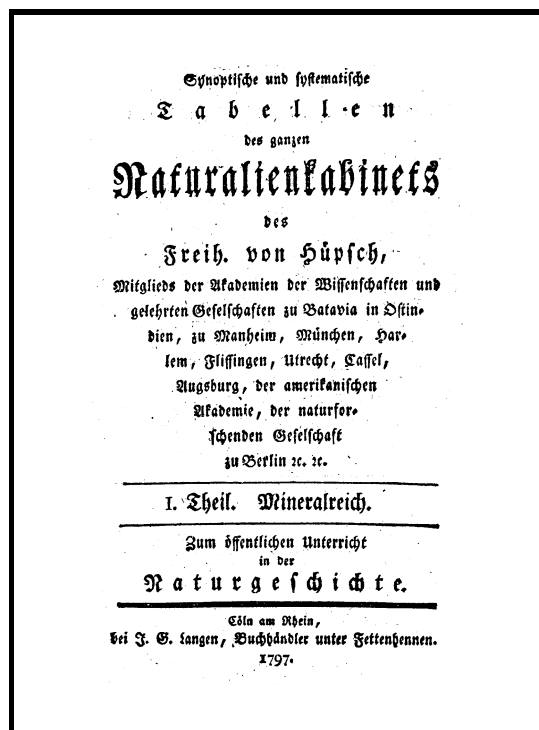
Johann Wilhelm Karl Adolph Freyherrn von Hüpsch, | Naturgeschichte | Niederdeutschlandes | und | anderer Gegenden. | [tapered rule] | Zweiter Theil. | Vorläufige Abbildungen von Tab. VIII. bis XV. | [...15 lines of text.] | Raspesche Buchhandlung | in Nürnberg. | [ornate rule] | 1805.

2 parts in one volume. [Part 1] 4°: 44, [10] p.,

plates I-VII (hand-colored). [Part 2] 4°: no text, but plates VIII-XV (hand-colored).

VERY RARE. No more published. The plates are remarkably accurate renditions of various German fossils. Part two contains the eight plates VIII to XV only; the text to this part was never published.

REFERENCES: *Allgemeine Deutsche Bibliothek*: 51, p. 444. • BL: [7204.i.7.]. • BMC: 2, p. 887. • Boehmer, *Bibliotheca Historiae Naturalis*, 1785-9: 1, p. 585. • Cobres, *Deliciae Cobresianae*, 1782: 2, 815. • *Jenaische gelehrte Zeitungen*: 1781, p. 718. • *Katalog Bergakademie Freiberg*, 1879: p. 317 [VII. 358.]. • *L'Espirít des Journal*: 1778, p. 404. • LKG: XVII 149b. • Partsch, *Katalog der Bibliothek*, 1851: no. 1959. • Schröter's *Neue Literatur*: 2, p. 398.



SYNOPTISCHE UND SYSTEMATISCHE TABELLEN, 1797

2371. — German, 1797.

Synoptische und systematische | Tabellen | des ganzen | Naturalienkabinetts | des | Freih. von Hüpsch, | [...8 lines of titles and memberships...] | [rule] | I. Theil. Mineralreich. | [rule] | Zum öffentlichen Unterricht | in der | Naturgeschichte. | [rule] | Cöln am Rhein, | bei J.G. Langen, Buchhändler unter Fettenhennen. | 1797.

8°: [A]-C⁸ D⁴; 28ℓ.; [1]-55, [1] p. PAGE SIZE: 192 x 120 mm.

CONTENTS: [1], Title page in German.; [2], Title page in Latin.; [3], Title page in French.; [4]-39, Table of classification.; 39-47, "Beobachtungen" [in German]—signed, B. von Hüpsch, August 1797.; 48-55, "Observations" (in French)—signed, B. de Hupsch, August 1797.; [1 pg], Blank.

VERY RARE. No more published. Describes in a synoptically and systematic tabular arrangement the mineralogical portion of Hüpsch's natural history collection. The title pages in German, French and Latin indicate that the volume was published for a continental readership, perhaps in preparation for selling the collection. Some observations at the end of the volume are printed in both French and German, and contain minor details on the history of the formation of the collection.

REFERENCES: BL: [B.384.(1.)]. • *Freilich Sale Catalog*: no. 258. • LKG: XV 47. • NUC: [no copy listed]. • Wilson, *History of Mineral Collecting*, 1994: no. 76.

HUREAU DE SÉNARMONT, Henri.

See: Sénarmont, Henri Hureau De.

HUSSAK, (Franz) Eugen. (BORN: 1856; DIED: 1911) *Austrian/Brazilian petrologist & mineralogist.*

Hussak for a time worked with the K. Geologische Reichsanstalt, Vienna. He then became an instructor at the Universities of Kiel and Bonn, before emigrating to Brazil, where he served as a geologist for the Comissão de Planalts Central, and later in the mining industry of the country.

REFERENCES: Ihering, Hermann von. "Necrologio, Dr. Eugenio Hussak," *Revta Mus. paul.*, Sao Paulo, Brazil, 9 (1914), 18-54, portrait. • *Österreich Biographisches Lexikon*: 3, p. 16. • Sarjeant, *Geologists*, 1980: 2, 1350.

2372. — German, 1885.

Anleitung Zum Bestimmen | Der | Gesteinbildenden | Mineralien. | Von | Dr. Eugen Hussak | Privatdocent An Der Universität Graz. | [rule] | Mit 103 Holzschnitten. | [tapered rule] | Leipzig | Verlag Von Wilhelm Engelmann | 1885.

8°: [2], [i]-[iv], [1]-196, [2] p., 4 plates, 103 illus. PAGE SIZE: 220 x 145 mm.

CONTENTS: [2 pgs], Title page, verso "Alle Rechte vorbehalten."; [i], "Vorwort."; [ii], Blank.; [iii-iv], "Inhalt."; [1]-196, Text.; [1 pg], "Zusätze und Berichtigungen."; [1 pg], "Druk von Breitkopf & Härtel in Leipzig."; [At end], 4 plates.

VERY SCARCE. An important work in petrology, this is an introduction to the rock forming minerals. The text is divided into two parts: 1. Methods of examination and 2. Tables for the determination of minerals. The work gives more completely than had been before attempted in a single volue a description of the techniques used in determining the mineralogical study of rocks, using optical, chemical and mechanical operations. A second part gives a series of tables for the determination of the rock forming minerals, which condense a large amount of information down to a useful size.

REFERENCES: BMC: 2, p. 895. • NUC. • NY Academy Portrait Catalog. • *USGS Library Catalog*.

2373. English transl., 1886: The | Determination | Of | Rock-forming Minerals. | By | Dr. Eugen Hussak, | Privat-Dozent In The University Of Graz. | [rule] | With One Hundred and Three Woodcuts. | [rule] | Authorized Translation From The First German Edition | By | Erastus G. Smith., Ph.D., | Professor Of Chemistry And Mineralogy, Beloit College, | Beloit, Wisconsin. | New York: | John Wiley & Sons. | 1886.

8°: [i]-viii, [1]-233, [1] p., 103 illus., diagrams.

HUYGENS

CONTENTS: [i-ii], Title page, verso "Copyright, 1885, by | John Wiley & Sons."; [iii]-iv, "Preface To First English | Translation."—signed Erastus G. Smith, October 1885.; [v], "Preface."—Eugen Hussak, November 1884.; [vi], Blank.; [vii]-viii, "Table Of Contents."; [1]-196, Text.; [197]-214, "Bibliography."; [215]-218, "Explanation of Cuts Accompanying Part II."; [219]-228, "Cuts Accompanying Part II."; [229]-233, "Index."; [1 pg], Blank.

VERY SCARCE. Translation by Erastus G. Smith of *Anleitung zum bestimmen der gesteinbildenden Mineralien* (Leipzig, 1885), which closely follows the plan of the original edition.

REFERENCES: *American Journal of Science*: 3rd series, 31 (1886), p. 156-7. • NUC. • NYPL Catalog. • *Popular Science Monthly*: 29 (1886), p. 560. • *USGS Library Catalog*.

HUYGENS, Christian. (BORN: Haag, The Netherlands, 14 April 1629; DIED: Haag, The Netherlands, 8 June 1695) *Dutch physicist & mathematician.*

Huygens studied law and mathematics at the University of Leyden. Afterwards he traveled extensively throughout Europe, living in Denmark and France before returning to The Netherlands. He discovered the laws of centrifugal force and invented the pendulum clock in 1655. He maintained that light was moved by waves through the æther, opposing Newton's corpuscular theory. He was made a Fellow of the Royal Society of London in 1663.

REFERENCES: ADB. • Bell, A.E., *Christiaan Huygens and the Development of Dutch Science in the Seventeenth Century*. London, 1947. • *Biografisch Woordenboek Nederland*. • Bos, H.J.M., et al., eds., *Studies on Christiaan Huygens*. Lisse, Swets & Zeitlinger B.V., 1980. • Costabel, P. & M. Martinet, eds., "Huygens," in: *Quelques savants et amateurs de science au XVIIe siècle*. Paris, 1986. • DBA: I 584, 248-251. • DSB: 6, 597-613. • *Encyclopaedia Britannica*, 11th edition. • McKeon, R., "Le debuts de l'astronomie de precision," *Physis*, 13 (1971), 225-88 & 14 (1972), 221-42 [see 13, 236-41]. • Poggendorff: 1, cols. 1164-5. • WBI.

2374. — Latin, 1690 [First edition].

[In black:] Traité | [in red:] De La Lvmière. | [in black:] Où sont expliquées | Les causes de ce qui luy arrive | [in red:] Dans la Reflexion, & dans la | [in black:] Refraction. | Et particulièrement | Dans l'étrange Refraction | [in red:] Dv Cristal D'Islande. | [in black:] Par C.H.D.Z. | Avec un Ddiscours de la Cause | [in red:] De La Pesantevr. | [in black, ornament] | A Leide, | [in red:] Chez Pierre van der Aa, Marchand Libraire. | [in black:] MDCXC.

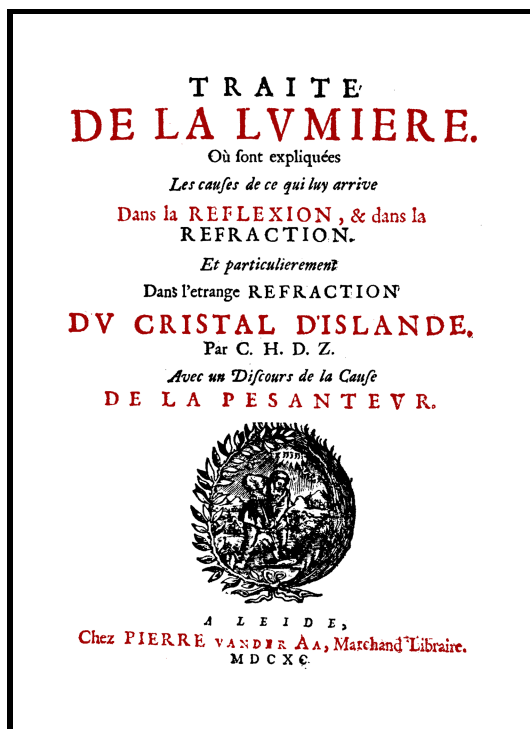
[TITLE PAGE OF SECOND PART READS:]

Discovrs | De La Cavse | De La | Pesantevr. | Par C.H.D.Z. | [ornament] | A Leide, | Chez Pierre van der Aa, Marchand Libraire. | MDCXC.

4°: *4 A-P4 Q2 R-2A4; 146ℓ.; [8], 1-124, [2], 125-128, [2], 129-180 p. Title page in red and black. PAGE SIZE: 194 x 157 mm.

CONTENTS: [2 pgs], Title page, verso blank.; [4 pgs], Preface, dated 8 January 1690.; [2 pgs], "Table Des Matieres."; 1-124, Text.; [2 pgs], Title page of second work.; 125-128, Preface.; [2 pgs], "Table | Des Matieres | Traitées dans ce Discours."; 129-180, Text.

RARE. Classic formulation of the wave theory of light and its application to the refraction that occurs in Iceland spar represents an effective mechanistic explanation of natural phenomena. Developed by Huygens in the 1670's but published only



TRAITE DE LA LUMIERE, 1690

after the appearance of Newton's *Principia*, it offered a characteristically mechanical reply to the mathematically based explanation of Newton. However, Huygens work made a profound impression on Newton, as can be seen in the mechanistic orientation of Newton's *Opticks* (London, 1704). In 1802, Thomas Young exploited Huygen's theory to explain optical interference, which would play an important role in the optical aspects of mineralogy and crystallography of the nineteenth century.

Variant issue, 1690: The work comes in two issues for which no priority as been established. Issue A as above, while issue B has the line "Par C.H.D.Z." replaced with "Par Monsieur Christian Huygens, Seigneur de Zeelhem." Both titles are reproduced in Horblit.

English transl., 1945: Treatise | On Light | In which are explained | The causes of that which occurs | In Reflexion, & in Refraction | And particularly | In the strange Refraction | Of Iceland Crystal | By Christiaan Huygens | Rendered into English | By Silvanus P. Thompson | [ornament] | The University Of Chicago Press | Chicago • Illinois. Translated by Silvanus P. Thompson [see note below].

Silvanus P. Thompson. (BORN: 1851; DIED: 1916) *English physicist.* Authored numerous books and papers, mainly on experiments in light and electricity.

REFERENCES: Dibner, *Heralds of Science*, 1955: no. 146. • DSB: 6, 609. • *Freilich Sale Catalog*: no. 261. • Honeyman Sale: 4:1730. • Horblit: no. 54 & 54a. • Jonathan Hill, Bookseller: cat. 100, no. 52. • LKG: XVI 312. • NLM 17th Century Books (Krivatsy): no. 6124. • Norman Catalog: 1, ??, no. 1159. • Schmitz, *Handbuch zur Geschichte der Optik*, 1981-90: 1, ??. • Sparrow, *Milestones of Science*, 1972: 111. (Thompson)